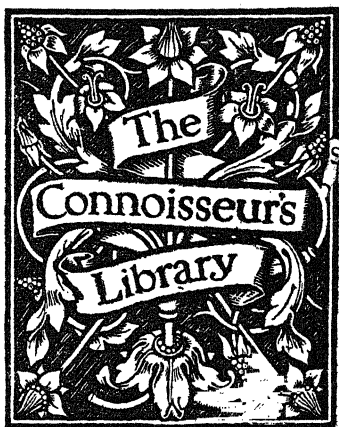


EUROPEAN ENAMELS

BY
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PREFACE

THE task of preparing a succinct account of enamelling in Europe has not been an easy one. Little is known of the enamellers, or of the history of their lives. Their works are for the most part unsigned, and are most of them now far from the country of their origin.

Although there are many monographs on the subject, yet so far as I am aware there is no work in English devoted to a systematic account of enamels.

To French authors, however, a great debt of gratitude is owing. The labours of Labarte, Laborde, the Abbé Texier, have alone rendered the task of writing this book possible.

Thanks are also due to M. Molinier, of the Louvre, whose excellent treatise is the best that has yet appeared. A recent work of magnificent appearance, but published at a price that is prohibitive for most persons, appears to me to contain the most profound investigation on the subject of enamels that has yet been made—written by one who is evidently familiar with the technique, as also with the archæology of the art. I allude to Kondakow's "Histoire et Monuments des Émaux Byzantins."

On all questions connected with Byzantine work Schlumberger's fine works should also be consulted.

PREFACE

The apologies of an author for the imperfections of which he is conscious generally appear out of place, because readers will be apt to consider that he who seeks to apologise for his speech had better have remained silent. If, however, this work should be found deficient, it will not be for want of an earnest desire, and a considerable time spent in trying to get it right. The aim of the author has been, not to pursue the paths of minute archæological research, but to try to present a broad general view of the subject. It is hoped also that the familiarity which he may claim to possess of the technique of the art may have helped in places to illumine the subject, and may induce his readers to view with indulgence the errors that no doubt their vigilance will detect, but which are to some extent inevitable in a subject upon which so few regular treatises have been written.

Thanks are due to the Burlington Fine Arts Club for permission to use the negatives of some of their plates.

H. H. C.

BARN RIDGE,
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EUROPEAN ENAMELS

CHAPTER I

INTRODUCTION

IN its widest sense the word "enamel" includes all sorts of brilliant varnishes, as for instance those covering baths or bicycles. It is, however, more correctly applied to shining glazes made of glass, which are melted and caused to adhere by means of heat to the surface of pottery, slate, or metals.

Glass is a compound of silica, or flint, with soda, or potash. It is made by finely powdering the materials and subjecting them to a white heat. The addition of some oxide of lead in the glass makes it more refractive of light, and at the same time more elastic and more easily fusible.

Although glass when cold is chemically very inert, so that hardly anything except hydrofluoric acid acts upon it, yet when hot it has very powerful solvent qualities. By this means it may be coloured, for many metals are capable of imparting a characteristic colour to glass. Thus iron gives a sickly green, copper a turquoise blue, cobalt a royal blue, uranium a yellow, chromium a green, and so

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on. No object can be "glazed" or "enamelled" unless it can bear the heat necessary to melt the glass. The method of application is to grind the glass up to impalpable powder with water, so as to make a thin paste, and to apply this in a thick coating to the object, which is then put for a few minutes in a very hot furnace. By this means the powdered glass is melted into a fluid and flows evenly over the work. When cold it thus forms a glassy surface.

Pottery and china ware is glazed in this way, but after heating, it must be cooled very slowly, or it is liable to crack. And, moreover, if the composition of the glass of the glaze does not suit the composition of the body of the china or crockery, it will split on cooling. Ordinary window or bottle glass will not adhere to china or earthenware, unless a considerable portion of clay is melted up with it. This tendency of glazes to crack—or, as it is called in old English speech, to "craze"—is one of the great difficulties of the potter, for each kind of body must have its own special glaze. In all cases, however, the use of lead oxide causes the glass to run better and renders it less likely to crack. Moreover, the lead increases the brilliance and fusibility of the glaze, and renders the exact temperature of firing of less importance. Hence the value of lead to the potter and the tenacity with which manufacturers cling to its use, in spite of the dangers attending the workmen in those factories where the strictest care and cleanliness are not observed.

Almost all crockery and earthenware in ordinary domestic use is glazed with lead. If the glaze is

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well made up with a sufficiency of silica, when once it is fused there is no danger of its being dissolved by any sort of food or drink ; but there are certain roughly made lead glazes which are dangerous.

Borax is a substitute for lead in glazes ; it causes the glaze to melt easily, and aids in dissolving metals so as to produce brilliant colour. Unfortunately, however, instead of improving the quality of the surface, borax renders it liable to crack, and requires, therefore, the greatest skill and care in use. The "leadless" glazes, about which much has recently been written, are made with borax instead of lead. But the difficulties attending their manufacture are considerable.

Glass which contains a good deal of lead is called "flint" glass, probably because it was first made in the town of Flint. On the Continent it is known as "crystal." On account of its highly refractive power, flint glass is used for optical instruments. The amount of oxide of lead which glass will dissolve is very great ; ordinary white glass will take up much more than its own weight of oxide of lead. The flint glass usually employed for cut-glass table ware only, however, has about 20 to 30 per cent of oxide of lead.

One of the most extraordinary properties of glass is the elasticity and strength which it possesses when in thin sheets or threads. Glass can be spun as fine as hair, and looks like floss-silk. Hair-springs of watches can be made of it. If a very thin piece of metal be coated on each side with a thin layer of glass, the metal may be bent without the glass breaking. In fact, it adheres something like, though not so well, as the varnish on patent

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leather. This extraordinary power of clinging to metal gives rise to the beautiful art of enamelling upon metals, which it is my object to describe.

In a book of this character it is not easy to decide whether first to give an account of the various sorts of enamels that have been made, and the schools of artists who have made them, or to commence with the method of making them, and then to go on to the history of the subject.

Upon the whole it has been decided first to give an outline of the method of manufacture, and then to describe its use and application.

In the present work, all that I have aimed at is to give such a sketch of the various processes as will enable their general character to be understood. Practical details I have already described in another book.¹ In order to comprehend or criticize an oil painting, it is not absolutely necessary to be acquainted with the manufacture and mode of applying pigments and other materials, though it is an advantage to know something of their processes in order to understand the limitations and possibilities of the art. When, however, we come to the inferior or secondary arts of jewellery and enamelling—arts which are very strictly limited and conditioned by the nature of the various materials employed—it is essential to be able to tell how works have been executed in order that their merit may be understood. Indeed, it is impossible to found anything like a proper critical system or comprehension of their works except upon a study of the methods by which they have

¹ "The Art of Enamelling on Metal," H. Cunynghame. Constable, 1899.

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been produced. And this is the reason why I think it necessary to give here an outline of the process of making enamels.

In the first place, then, it must be explained that only a limited number of the metals are capable of receiving a coating of enamel. Some oxidize so easily that the melted glass dissolves the oxide and colours the enamel so deeply as to obscure any other colour that may be desired. Others have the curious property of "occluding" air, that is to say, of absorbing it and putting it away in their pores, probably in a liquid state. They only give out this air again at a considerable temperature, and thus, just as the glass is about to flow, air rushes out of the metal and fills the glaze with bubbles like the gas in soda-water, and the work is ruined. Platinum and nickel have this curious quality.

Of all metals the best for enamelling is gold. It melts at a high temperature, is beautifully ductile, and the enamel clings firmly to it. Its glorious colour shines through the enamel and produces a result which for brilliancy is unequalled by any other material.

But only absolute gold should be employed. The alloys which are so largely—nay, so universally—used for ordinary jewels, melt at a lower temperature than pure gold; they become oxidized and dull in the fire; they are more or less brittle, and the glass does not adhere so well to them.

The beautiful enamelled jewels of the sixteenth century are all done (so far as can be judged) upon pure gold. I would therefore entreat the artist not to be too niggardly with this material. The gold may be used very thin, and the enamel then backed

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or mounted on copper ; but pray let us have all the visible parts of the work in the purest virgin gold, than which nothing can be more beautiful, whether enamelled, left dull, or burnished so as to be resplendent.

Added to this, it is to be observed that gold with even a hundredth part of alloy in it will tarnish, whereas pure gold remains brilliant for ever. It is not easy, however, to use the pure gold for jewellery in positions where hard wear is to be expected, for pure gold is as soft and malleable as lead.

Hence, then, our gold enamel work must be set in a protecting rim of diamonds, steel, nickel, or silver, or else of alloyed gold, so as to resist injury. Some of the finest cinquecento work was enclosed in bevelled glass cut like crystal, and this has a very pleasing effect.

A considerable quantity of the enamelled jewellery now being made consists of silver brooches and mantle clasps, frequently in silver and covered with patches of enamel of very considerable size. In most of these ornaments it seems to me that the enamel has been too rashly used and insufficiently protected ; for in order that a large space of enamel should remain uncracked, the metal on which it lies should not be at all strained or bent. This can only be secured either by making the metal very strong and heavy, or else (a better plan) executing the enamel on a small plaque let loosely into a deep recess in a strongly made buckle, or other ornament. Thus the strain on the setting never comes on the enamel plaque at all. As the matter stands, I fear that the present practice will cause great

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cracking of enamelled ornaments and perhaps entail a prejudice against them.

Silver melts at a lower temperature than gold. It is usually alloyed with copper. When the least trace of copper is present, silver heated to a red-heat becomes covered with a beautiful black adherent scale, which we know as "oxidized silver." But when silver is quite pure, it comes out of the furnace as white as when it went in. Exactly the same remarks apply to it as gold. It is too soft when unalloyed for general use, and enamels upon it should be in some manner protected from injury. Gold shows best when covered with red, yellow, or orange enamels, representing every shade from the blood-red of the ruby to the colour of flame.

If gold displays the various tones and hues of the sun, silver is fitted to display those of the moon. It is best employed with watery greens or with blues of deep evening or night. Enamels made with copper and cobalt show upon silver grounds like the shimmering opalescent green light in the depths of the sea. Enamels made with gold, uranium, or selenium pigments, glow upon gold like a fiery furnace. It is exceedingly difficult to blend both these on the same enamel. Artists usually choose either one or the other material as the foundation for their scheme of colour.

For larger work, humble but useful copper is employed in thin sheets. This metal shows only poorly through enamels; but beautiful subdued tones can be got from it, and for decorative work its sober, solid hues are most valuable. But it is apt to dissolve a little in the enamel, and hence the tints upon it are not so certain as those on silver or gold.

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Iron can also be employed, but not for transparent enamels, for in the fire it commences by turning black, and every transparent enamel of whatever tone only converts it into shining jet.

For opaque enamels it is a good foundation, and very tough. But it has to be specially treated, or else the enamel will not stick to it. Most of the hideous advertisements which disfigure the streets and railway stations are made on iron plates, and the use of enamelled ironware for saucepans and kitchen cups and saucers is increasing. It is a beautiful material. Had it been invented two centuries ago, it would have been ornamented by hand-painting, like rough peasant crockery. But as it had the misfortune to come into use in the present age, which is almost devoid of the feeling for original art, and only accepts already existing types of ornament and ornamented articles, the colours employed are white within and blue without, and no one seems to desire any sort of decoration.

The enamel itself consists of a flint glass, preferably made with soda, and containing from 25 to 40 per cent of lead oxide. The colours usually employed are as follows, with the proportionate quantities of colouring pigment in them:—

Colour.	Weight percentage of metallic salt.
Red (ruby) 01 gold chloride
Yellow (topaz) 15 of uranate of soda
Green (aquamarine) 3 of bichromate of potash
„ (emerald) 10 of nitrate of copper
„ (bottle green) 10 of oxide of iron
Blue (sapphire) 2 of black oxide of cobalt
Purple (amethyst) 5 of permanganate of potash

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Of course, any shades may be produced by mixtures of the above.

Opaque enamels are made by mixing the flint glass with oxide of tin. This makes it like white sealing-wax. It may then be tinted with various pigments.

The materials used in practice for making glass are powdered flint, or very clean sand, nitrate of soda, and red lead. Of course, the proportions may vary. A very average formula would be—

Powdered flint	.	.	5 parts
Nitrate of soda	.	.	1'5 „
Red lead .	.	.	3'5 „

They should be well mixed together by being sieved through a sieve, and then put in a covered crucible.

The melting of the materials is accomplished in a furnace which must be raised to a white heat. It takes some time to make reliable glass. Merely to heat the materials till they run together is not enough; the glass must be heated for many hours.

It may then be powdered up, mixed with the pigments that are to be used to colour it, and again reheated. This time it is enough to melt it, and stir vigorously. For all that is needed is that the pigment should be dissolved in the glass, and in most cases this is done easily. Enamellers rarely make their own glass—they buy it. Two sorts are used, namely, ordinary crystal glass, and what is known as heavy flint glass, which is used for telescopes and optical instruments. Soda glass should be employed, as it affords better colours than potash glass. It may be purchased at most glass-makers' at a cost of from 3d. to 6d. a pound.

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The furnaces employed are very similar to those used by brass-founders. An ordinary fireplace can, by means of some bricks made of fire-clay, soon be converted into a furnace. Natural draught will do if the chimney is about thirty feet high, otherwise a blower of some kind must be provided. The best fuel is coke—not the miserable stuff which is delivered from the gas-works at about the price of coal, and from which nearly all the heating power has been extracted, but proper manufacturer's coke, which is made at the collieries. This coke is very free from sulphur, and has great heating power. Sulphur is the great enemy of glass-makers. It tinges the flint glass yellow, and quite destroys its brilliant surface.

Good enamel should be clear, brilliant, and uniform, free from bubbles, and break with a clean, smooth, curved fracture. It should resemble good ice. A material like rotten ice is quite unfit to use.

Assuming, then, that our coloured glass is made, it becomes necessary briefly to outline the mode of using it. As has been said, the three metals generally employed are gold, silver, and copper. Each of them is best when pure. For pure metals melt at a higher temperature than alloys. Thus, for instance, the melting-point of an alloy of gold and silver will be less than that of either gold or silver. And it is a great point to have a metal that has a high melting-point, so that it shall not bend or melt in the enamelling furnace. Gold is much employed for jewellery. Unfortunately, enamelled jewels, as has been already explained, are very susceptible of injury. If constantly worn, the enamel is almost certain to chip away. They are,

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therefore, most suitable for necklaces to be worn with evening dress, or for tiaras, for which purpose enamel with gold is magnificent, especially if it is ornamented with precious stones. But for everyday use, for rings or watchchains, enamel is not very suitable unless it can in some way be protected from wear. Silver harmonizes well with all shades of blue and green. Such objects as peacocks or angels or cherubs with delicately tinted wings can be very beautifully rendered in enamelled silver, and fine drinking-cups, candlesticks, and ornaments can be made out of this metal. It should be used pure, for alloyed silver blackens and also stains the enamel a little.

Where, however, strength is wanted, and wear-resisting qualities, both silver and gold must be alloyed; but the result is never so pleasing as that with the pure metals. Indeed, for most purposes, the best way of ornamenting cups and dishes and articles which are to stand on shelves, is to do the enamel on pieces of metal, and then attach them to the cups or other articles that are to be ornamented. This is called *appliqué* work.

Copper, or gilding-metal, i.e. copper alloyed with a little tin, is often used where cheaper work is wanted. It can be made to look well when enamelled, but it has not the resplendent brilliance of gold or silver. In order to make copper enamels appear like enamels upon gold or silver, a very ingenious method is employed, called putting on *paillons*. The copper is first covered with a coating of enamel, which is melted on in the furnace. Then leaf-gold or leaf-silver is put upon it, and fired till it adheres to the coating of melted enamel

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on which it has been placed. Upon the top of the leaf transparent enamel is now placed so as to give the effect of enamel upon gold. Thus at a small price the effect of enamel upon gold is produced.

There are also several different ways of putting the enamel upon the metal. It may be simply glazed over it or else small partitions, or "cloisons," may be fastened over the surface of the metal so as to divide it into little spaces bounded by low walls. These cloisons are not usually more than one-fiftieth of an inch high, and in the best work are soldered on with hard solder. Powdered enamel is now heaped up in the spaces enclosed by the walls, and the whole being then heated in a furnace the enamel is melted into, and fills up those spaces. Of course, in melting it shrinks and appears concave. A second coat is then put on so as to raise it. Sometimes enough enamel is put on to cover up the surface completely, cloisons and all. This is then ground down on a piece of lead, with emery powder and water, till the surface is flat and shows the enamel smooth and bounded by the gold cloisons. It is then polished with rotten-stone and water or oil. This polished cloisonné has a more smooth and refined appearance than rougher work where the enamel is simply melted in, but is not so vigorous. Almost all Japanese work is executed in polished cloisonné enamel.

Another method is to stamp recesses in the metal, and melt enamel into them. This often produces a very beautiful result.

Closely akin to it is the plan of embossing the metal into high relief, and then enamelling over the whole, covering different parts with

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different colours. These methods are called "basse taille."

Another method is, with an engraving tool, to cut out spaces on a surface of copper, and fill up the holes thus formed with enamel melted in. This is called "champlevé."

Another plan is to take a simple plate of copper or gold, and to spread the enamel over it and melt it on in the manner in which a painter covers his canvas with pigments. This is called "painting in enamel," and the result "an enamel painting." The most ambitious work is executed in this style, and a description of it and the various schools of enamel-painting will be given hereafter.

But after all, these various modes are in essence the same. What is needed is to cover the surface of the metal with coloured glass as with a paint.

But no paint that any artist ever used—hardly even the hues of Nature herself—can vie with the extraordinary gleam and grandeur of tinted glass. Nothing but painted church windows can give an idea of it. And therefore when I come to discuss the principles of enamel-work, I shall have something to say upon the subject of painted windows.

Last of all, a very pretty but fragile sort of enamel is made by filling up the interstices of gold or silver filigree with enamel glass. We first meet with this beautiful work about the time of Francis I, but the Byzantines probably also knew and used it.

I will shortly describe these processes. To execute cloisonné work, take a plate of metal, preferably pure gold. Draw some pure gold wire through a square hole in a steel draw-plate, until

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it is about one-fiftieth of an inch thick and one-thirtieth wide. Then with this make the partitions, putting them in position, and moistening them with a flux made of melted borax ground up in paraffin oil. Place near each a few grains of solder, composed of a mixture of (say) three parts gold and one of silver, and placing the whole upon a piece of any good-radiating, non-combustible material, such for instance as a slab made by moulding asbestos and a little plaster of Paris up with water, heat it by means of a blow-pipe to a full red. The solder will melt—run in under the partitions and solder them down to the gold base. Then any ornaments that are to be added must also be soldered on. Small figures may be embossed out of thin gold, about the thickness of a sheet of paper. Wire may be twisted up into various forms. In fact, there is no limit to the art. As soon as the piece of work has been finished in gold, it is now to be enamelled. For this purpose the enamel must be broken up, and then finely pounded in a mortar with water. The pounding may be continued till it is finer than the finest sea-sand, but should not go on till it is quite an impalpable powder. This ground enamel will now consist of a mixture of grains of all sizes, from impalpable dust up to grains that may almost be seen by the naked eye. If it were to be melted in this condition, it would become opaque; for the fine grains would entangle and imprison a quantity of air among them, and would melt over and enclose the air, and make the enamel muddy and semi-opaque.

Hence, then, the fine enamel dust must be washed out. There is a use for it, which I will explain

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presently. The washing is effected by the process known to chemists as elutriation, that is to say, the ground enamel is stirred up vigorously, and allowed to settle for a few seconds. The larger particles fall, the finer remain suspended, and are poured away. The enamel thus washed is spread upon the metal, or pressed into its cavities, and then dried by pressing a clean, soft cloth on it. The grains adhere together and not to the cloth, which, however, sucks the water out of them. The drying is then completed over a hot plate.

Before, however, the enamel is dry, it should be squeezed into a tight mass, and moved about with little needles and tools of any convenient shape, so as to cover those parts of the work upon which it is desired that it should lie.

When the powdered enamel is perfectly dry, it will be found that the grains adhere together. It is true that this adherence is very slight, and could be destroyed by a shake, but it is enough with gentle handling to enable the piece of metal with the enamel upon it to be carried about. Of course, the adhesion would not be enough to enable the powdered enamel to stick to a vertical surface of metal such as the side of a cup. Where that is wanted the water with which the enamel is wetted must be mixed with a trace of gum arabic. But very little must be put, for if there were much it would carbonize in the firing and stain the enamel, and make it opaque.

The work is now ready to be fired. If we could get a fire of the finest glowing wood-charcoal, such as the old enamellers used, all that would be needful would be to lay on it a little cake of good fire-

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clay that would not crack, and simply put the work on it, and leave the whole to become red hot. Or again, we might cover the cake of fire-clay with the work on it with a fire-clay lid, and then heap the charcoal on it, so as to get more heat. The mediæval enamellers used spoons of iron with iron covers. The work was put into the spoons and then the spoons inserted into the fire. In any case the enamel soon melts. But nowadays pure charcoal is no longer available; we have only coke or gas to depend on, and both produce fumes highly charged with sulphur. The least trace of sulphur, coming in contact with flint glass, causes the production of sulphide of lead, and in an instant covers the glass with a thin, almost opaque, black layer, and totally spoils it. Hence it is necessary, where coke or gas is used, to isolate the fire completely from the work. This is done by putting the work in a fire-clay muffle, just as bread is put in a baker's oven. The fire plays all round the muffle and raises it almost to a white heat. Within reasonable limits, the hotter it is the better. An opening is provided, with a little door, by which the work can be introduced into the muffle or oven, and through which its condition can from time to time be examined.

The work is now laid upon a small slab of fire-clay, covered with a mixture of clay and whitening—to prevent any stray parts of the enamel adhering to the plate; for melted glass will not adhere to whitening. It is then gently put into the furnace, and the door almost closed, leaving only a crack to look in by.

The plate and work soon get hot, the enamel darkens, then appears as if it were sweating, and

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finally melts into a shining coating like a highly polished varnish. This occurs in from two to four minutes. It may then be taken out. And now comes the wonder. So elastic is this thin varnish of glass on the metal, and so closely does it adhere, that though a wineglass similarly treated, or even left to cool without annealing, would shiver into a thousand pieces, yet the enamel, while still warm to the touch, may be put under a tap of cold water with impunity. This wonderful strength is due to the thinness of the layer. For thin films of glass possess wonderful tenacity and elasticity. But there is another wonder in the matter, for the rate of expansion and contraction of glass by heat is very much smaller than that of copper, gold, or silver. Hence, when the metal is hot and the glass soft, we might imagine that, as the whole cooled, the metal would contract more than the glass, and the glass would be puckered up into ridges. But nothing of this kind occurs. As the glass cools, it contracts slightly. The metal would like to contract more, but cannot, for the glass, when it has once set, holds it tight. In consequence, therefore, the soft gold, copper, or silver, is pulled out like a piece of sheet india-rubber. When the enamel is again heated, as soon as it becomes soft the metal is permitted to expand, in which expanded position it is held as the enamel again cools. So that enamels gradually become larger in the process of repeated firings. When enamel is, however, put upon a very thick piece of metal, it cannot draw the metal about, but is obliged to remain in considerable compression. For this reason the surface on which it is placed is well roughened.

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If enamel be placed on one side only of thin metal, then, as it cools, and the metal shrinks more than the enamel, the work curls up, and the enamel flies off it. This peeling off of the enamel can only be prevented by putting a coating of enamel on both sides of the metal plate, by which means the two coatings of enamel counteract one another and keep the metal straight between them, and hold it tight while they force it to expand.

I have described cloisonné. Champlevé is executed by cutting out hollows in a thick plate of copper or gilding-metal with a graver, and filling up the hollows with enamel. After this is done the work is well cleaned and then gilt. The effect is very massive. Painted enamels are executed upon thin sheets of copper, which are usually embossed or dished at the edges so as to make them convex and give them greater strength. The enamel is put on in patches. After that, fine painting is done upon it, with enamel glass ground up very finely, and applied with a camel's-hair brush and certain oils and turpentine. In this way every sort of effect can be obtained, from a deep-glowing, resplendent picture to a delicate Dresden china or miniature. Indeed, upon white plaques miniatures can be executed far more delicately than upon ivory, and with much greater brilliancy.

There is one pigment which is by convention largely used on enamels, the use of which has been discontinued in ordinary painting. I allude to gold paint made of finely ground gold dust, laid on with weak gum arabic. Gold is splendid for heightening and giving value to colours. A somewhat dull and heavy picture may be made striking

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by means of gold haloes round the heads of the figures, and gold stippling on the high lights of the drapery. The use of gold was very frequent with the old missal painters, who knew its value. From them it was handed on to the early painters in tempera, and is still to be seen in many religious pictures. But with the growth of realism—a growth which was completed under Raphael and Michael Angelo—the use of gold ceased, and it is quite disused in modern pictures. But it is an indispensable adjunct to work in enamels.

In conclusion, it should be observed that there is an idea in the minds of some persons that the old colours of windows and enamels cannot be reproduced. This is a pure illusion. Not only can modern makers make every single colour that the ancients were able to produce, but they can make them far more brilliant. Not only have we crimsons and rubies that would have been the despair of the workers in the Middle Ages, but we have pearly and delicate greys which they never attempted to produce.

Why, then, is it that our modern glass looks so crude and vulgar?

The answer to this is, that the ancients, fortunately for themselves, were not possessed of our manufacturing skill; they could not make a large piece of red glass of a uniform tint; with them it was streaky and uneven. Now it is one of the fundamental rules of colouring that uniform tints are very disagreeable. Beauty in colour invariably depends on gradation. Without gradation a geometrical pattern, however good in design, looks like a piece of oil-cloth. Thus, if a background of an

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ornament has to be filled in with a colour, it is far better that that colour should be put on by hand, and show some of the variations and irregularities of hand-work. The mind loves variety. It is variety of touch that distinguishes the performance of a skilled musician from the play of a barrel-organ.

But in the early days of the revival of painted glass, about the middle of the last century, the inspiration of it was taken from the Munich school. Large areas were covered with magnificent, but perfectly uniform, ruby-reds, blues, and greens. The result was glaring, hard, and uninteresting. Painters took no trouble about the balance of the colour, nor the proper contrasts, and hence their brilliant windows, whose colours in reality far eclipsed anything that Chartres could show, appeared bald and poor. But if any one doubts how far in colour modern glass can surpass old, let him go into an old cathedral, and take with him some scraps of modern glass, and see if he can match them. The most cursory inspection will display the superiority of modern colours. Our artists, then, have no excuse. But indeed, it is not the artist who is to blame so much as the purchasing public.

It is now necessary to say something generally about the quality of enamels, and the principles upon which their beauty depends.

In judging of any work of art, the first thing to be borne in mind is the use for which it is destined; next, the material out of which it is made; and thirdly, the public to whom it is addressed.

It is quite absurd to use the same principles of decoration for a fresco in a large hall and for a teacup.

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No picture can really be judged till it is hung up in the place it was designed to occupy by the artist. Thus, for instance, sacred pictures are ludicrously out of place in our ordinary well-lit galleries. They were probably painted to shine out of the gloom of an altar recess. But to hang a Madonna with a Jan Steen on one side of it and a Frith on the other, is to give it no chance. You might as well put the Venus de Medici between Gog and Magog at the Guildhall. And this is especially the case with enamels. To be appreciated, they must look precious, and be surrounded with a beautiful setting.

In the next place the nature of the material must be considered. It is almost impossible to make a coloured enamel exactly obey your hand or will.

As a rule you can only lump the colours on, as if one should paint with a trowel in coloured sand. Delicate gradation is almost impossible. Low tints and pale greys can be got with common oil paints. But the point in which enamel is unrivalled is its possibilities for tremendous effects of colour. It can actually be made to look like fire, or again like deep-coloured wine, or again like a turquoise sea, or again like an opalescent morning cloud. No shade of translucent colour is inimitable by it.

At once, then, we see that splendid colour effects should be the aim and object of the enameller. He may use black of course, but only because his black is to the ordinary black of the painter what the transparent gloom of night is to a blackleaded stove. No black that oil paint can produce can for an instant compare with a dark semi-transparent blue-black enamel. For this reason mere finikin

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miniature-painting on white surfaces, as is done in Battersea and Bow enamels, throws away the possibilities of the art. A few of such pieces may be interesting, but they are not work of the highest order. Of course, it is not here intended to say that no small painted work can possibly be good. In art, the end justifies and sanctifies the means, and it would be pedantic to lay down rules too narrowly. But though rules of art are for pedants, yet principles are for wise men. And it seems to be a leading principle of art that any material should be selected and treated in such a way as to bring out its fine qualities. Stone is splendid when, tier upon tier, the solid forms of kings, bishops, and angels tower upwards towards heaven; but the very same stone is ludicrous when it is cut into hanging chains or basket-work meshes. In the cemetery at Milan—full of monuments to departed commercial magnates—marble lace veils, braid, and even elastic-sided boots, are to be seen, executed with lifelike fidelity. Marble tears roll down the faces of sorrowing relatives, or drip from marble eyelashes. Absurdities like these would have been avoided by a consideration of the character of the material, which is not suited to the representation of perforated veils, or of the flow of water. Again, wrought iron is beautiful when drawn into chains or tendrils of plants, or used in such a way as to display its tensile strength, as in the tomb of the Scaligers at Verona. Cast iron, on the other hand, though suitable for solid pillars, is absurd when made into the form of delicate tracery. You feel that you could kick a piece off it with your boot, and few examples of such work exist in public

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places, where the boys of the neighbourhood have not already set you the example. All this is bad art. People often abuse railway stations. But a railway work only becomes bad art where cast iron is used to represent stone, bronze, or wood, or where horrible replicas of some stupid scroll run for yards over a bridge which would have been handsome if left unornamented.

In fact, bad art is generally ornament out of place, just as Faraday said that dirt is only matter out of place. All ornament is good in its right place.

Applying, then, this principle to enamels, it will be expected that in the finest work we shall desire brilliance and rich or delicate colour. Where we do not meet with them, we shall look for some counterbalancing advantage.

At South Kensington the cases of enamels in one of the upper galleries are wisely arranged in chronological order. It is a somewhat melancholy reflection, that after a certain point of excellence has been reached in the fifteenth century, as we pass from case to case and object to object, the workmanship improves, but the art declines, and the worst objects of all are in the latest compartment. Unhappily, this is not an isolated example of the progress of an art which too often proceeds from fine conceptions rudely executed to puerile conceits executed with accurate mechanical skill.

There are also one or two more principles which would seem to need consideration before we attempt a critical review of the history of enamelling.

Art, like literature, may be used for a variety of purposes. It may be used for teaching, like church art of the twelfth century; or for magnificence,

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like the art of Venice or Florence ; or to stimulate religious fervour, like Greek monastic art ; or to embellish domestic life, like the Art of the age of Francis I or Charles I ; or to stimulate debauch, like later Italian art, or the Art of the Regency ; or, again, it may have none of these objects. It may aim simply at giving pleasure to the sense of form, colour, and proportion ; or, again, stimulate our love of natural objects and scenery, like the art of Japan.

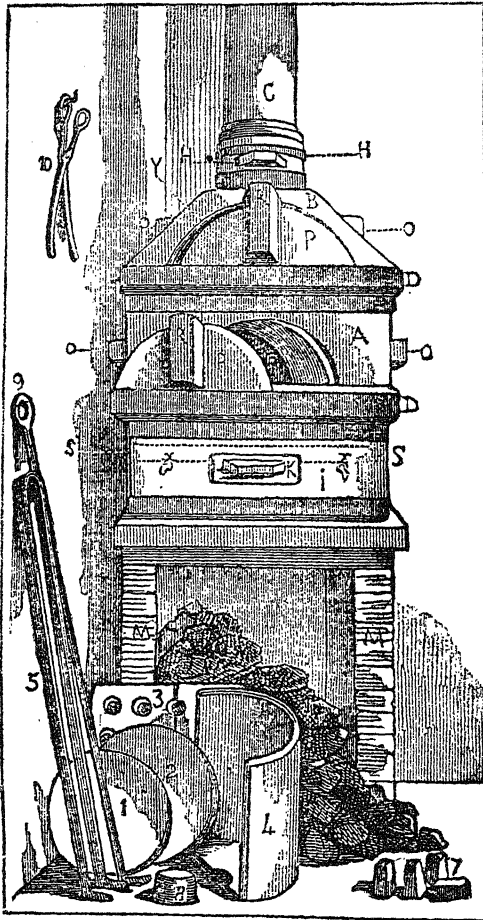
But it seems to me very unfair that the votaries of any one of these styles should cast stones at the shrine of the others. What right have the admirers of "art for art's sake" to proscribe and condemn all art that aims at a moral purpose ? They may not like it, nor think that morals can be improved by art ; or they may dislike morals altogether ; but surely there is too strong historical evidence of the existence of art as an aid to devotion for it to be pronounced either non-existent or false. In literature, there are many persons who value writing almost entirely for its "form." They care little for the meaning, and regard only the language. I have known a distinguished classical student who pronounced Darwin's "Origin of Species" the finest of modern books. The science, he said, he did not care for ; nor did he take the smallest interest in whether the theory was true or false. But the style, he said, was perfection. This is an example of the use of "art for art's sake." And there are some critics who look upon pictures in no other way than this.

But, in truth, art is as wide as literature. Like literature, it may be true or false to its purpose ; but if it inspires, persuades, delights, instructs, or

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consoles mankind, it must be good, whether it be the art of Tahiti or Florence, of Greece or of Japan; and whether its value consist in the beauty of its form, or the import and grandeur of the message which it is intended to convey.

Let us, then, in our examination of enamels, approach the subject with very wide sympathies, and, while retaining our preferences, not allow them to obscure the catholicity of our judgment.



AN OLD-FASHIONED ENAMELLING FURNACE FOR USE WITH COKE

CHAPTER II

ENAMELLING IN ANCIENT TIMES

HE who desires to determine the extent to which enamels were made by the ancient artists, such as the Egyptians, the Greeks, the Romans, or the Babylonians, will find himself in the presence of a problem of peculiar difficulty.

Not only are the remains few in number, but it is, in general, impossible to submit them to analysis; for they are naturally too rare and valuable to be broken up. Hence, then, we are really quite unable to say whether certain Egyptian ornaments have been made by filling up cloisons with little shaped pieces of glass or of precious stone stuck in with cement, or whether the hollows have been filled with melted glass. Nay, in some cases it is doubtful whether the content is more than a mere coloured mastic or paste. To give a review of all that has been written upon this question would occupy half our volume, and lead us away from the main subject of our inquiry. It seems enough to say that certain ancient jewels were undoubtedly executed by the inlaying process, others equally certainly by the melting on of glass. There is nothing surprising in this, because the ancients, especially

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the Egyptians, were perfectly acquainted with the art of laying brilliant colours in enamel upon terracotta figures and other objects which were largely used to make up necklaces. It could not, therefore, have seemed a wide step to have applied these enamels upon gold.

It is, however, to be remembered that the specimens we possess of ancient jewellery, especially of Egyptian jewellery, are by no means fairly representative. For in Egypt all art and jewellery perished that was not connected with the rites of the dead. It is not probable that the best family jewels were used to decorate mummies; probably roughly made second-rate work was used for this purpose, except in the case of the greatest kings. The specimens, therefore, that we have, only afford us a very inadequate idea of the whole. For it must be remembered that according to the tenets of many ancient forms of religion, notably the Egyptian, the use of placing these things in tombs was that the ghosts of the departed might have the enjoyment of them. To this end in Egypt, in early times, fruit and food were put in the tombs and constantly renewed, and possibly also slaves were killed and buried with their masters. It was not, of course, believed that the ghosts actually ate the food, but it was thought that in some manner they enjoyed the essence of it. From this it was but a step to making wooden or clay representations of the servants and food, instead of actually immuring the reality; and the final stage was reached when paintings were substituted representing the pleasures of the chase or the delights of drinking or love-making for the ghosts to enjoy. From this point of view

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the glass representation of a jewel would give as much pleasure as the reality, and thus the ghosts could be regaled and propitiated at a moderate expense, while the pecuniary loss of valuable servants could be avoided by placing blue images of them in the tombs, instead of immuring the men themselves.

Imitation of precious things has been one of the leading factors in the history of art. Ancient painted windows were originally designed to represent jewels, copper shrines to represent gold; and the use of gold-leaf and gilding, now so common, arose from a desire to give the idea of value, rather than from the selection of gold as a suitable sort of paint.

It is, perhaps, proper that a few words should be said respecting the origin of the word "enamel."

Certain Greek authors, who in the sixth century mention gifts by the Greek emperors to the churches of their dominions, speak of articles which were certainly of enamel. They were often at a loss for words to describe it. Finally, they seem to have fastened on the word "electron," a word which is met with in the classics, and has given rise to endless ingenious conjectures. (See Jules Labarte, "*Recherches sur la peinture en émail*"; F. de Lasleyrie, "*L'Electrum des anciens était il de l'émail?*" J. P. Rossignol, "*Les métaux dans l'antiquité.*") The word "electron" is found in Homer, in Hesiod, and in Sophocles, and occurs both in the Iliad and in the Odyssey. It also occurs in Aristophanes and in Virgil. It is found in Martial, Pausanias, Strabo, and Tertullian. In all these cases it evidently means some sort of beautiful, lustrous, shining material used

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for ornamenting shields and other things, and stands certainly for amber in some cases.

But whether, as some think, it is also used to designate a mixture of gold and silver, or whether, as others contend, it is glass, seems quite impossible to determine. Pliny uses it expressly in the former signification, and gives the mode of making it. He further tells us that "native electrum" has the property of detecting poisons, for in such cases semicircles, resembling the rainbow in appearance, will form upon the surface of the goblet and emit a crackling noise like that of flame, thus giving a twofold indication of the presence of poison ("Natural History," Book XXXIII, chap. XXIII.). Pliny's opinion on such a question as this is not of much value, as his work was only a sort of jumble of extracts from various authors, put together by a man who knew but little of science and certainly had not tried many of the recipes given in his book. What he here describes seems to be the action of an acid upon an alkali.

On the other hand, in Hebrew we have another word which seems equally puzzling. Ezekiel speaks of "haschmal" (chap. i. 4).

In the Septuagint this word "haschmal" is rendered "electron"; but unfortunately we are, even with the aid of this translation, no nearer the true nature, either of electron or haschmal. Some have suggested that the word "enamel" is derived from "haschmal."

Only practised philologists can tread the thorny paths of word-derivations. But the public will probably prefer the more simple derivation from the German word "schmelzen," to melt,

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which in early French becomes "esmail," and is written "émail" in the modern manner. In Latin this was written "smaltum," and appears to have first been used in the ninth century. How this word became "enamel" I do not pretend to say. But in modern times, with the true trade instinct of calling everything that which it appears to be rather than what it is, the word "enamel" has been used for any sort of shiny paint, even though not "molten" or "smelted," and, in consequence, a valuable word has been lost by indiscriminate usage.

Nothing is more difficult than to determine whether the nations of antiquity extensively practised the art of enamelling on metal. There would be every probability of it; for they were fine gold-workers and adepts in the art of working in glass; and they were also in the habit of enamelling pottery. Hence it seems only reasonable that enamelled metal should have been in common use.

But the proofs are not conclusive. Many pieces, which at first sight look like cloisonné enamels, are merely pieces of marble or stone fixed into cloisons with cement. In other cases, where the material in the cloison seems certainly to have been melted in, it is by no means clear that the material is really glass. It may be a cement. The piece which seems most nearly to establish the existence of the art among the Egyptians is in the possession of Mr. F. G. Hilton Price, of London, a well-known collector of Egyptian antiquities.

I cannot find that there are many, if any, pieces on the Continent that carry the matter further, although many instances are cited. M. de Laborde,

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in his learned notice on the enamels of the Louvre, systematically disposes of them. We can only say that though there is undoubted evidence that the art existed among the nations of antiquity, very few specimens have come down to us, and these do not attain a very high artistic standard, so far as the use of the enamel is concerned.

CHAPTER III

EARLY GAULISH ENAMELLING IN EUROPE AFTER THE CHRISTIAN ERA

IN the museums, especially in the British Museum and in the museums of France, a number of small enamelled articles are found, by far the largest number of which are rather clumsy, but not inartistic, enamels upon bronze. The metal has been cut out in patterns, and the enamel inserted and melted in by means of heat. These works date from before the Christian era and up to the first four centuries A.D. They are found pretty widely distributed over Europe. Whether the art of making them was a Roman art, or one invented by the barbaric tribes, appears quite uncertain.

Philostratus, who wrote at Rome in the first part of the third century, mentions permanent colours as being laid on burning brass by the Barbarians near the ocean. It is very probable that he was here alluding to the ornaments above mentioned. But it seems curious that if the art was so widely known over Europe, it was not practised at Rome.

Perhaps it was despised, as a cheap sham method of decoration; or, again, perhaps it did not suit Roman weapons or accoutrements. Thus, for in-

EARLY GAULISH ENAMELLING

stance, the beautiful art of damascening iron or steel with gold is not used in Europe. It is only practised by the Indian tribes, and no one out of India seems now to think of attempting to ornament weapons in this manner. The colours in these Gaulish enamels are laid on in juxtaposition, without the use of cloisons. This sort of ornament appears to have died out about the fourth or fifth century, though it was revived later, as we shall presently see. The question of the manner in which this work was executed has been the subject of some dispute. Laborde, the great French antiquary, contended that "the ridges raised in relief, instead of separating each colour of the enamel, serve to form the principal divisions of the design. The spaces left by them have been filled with enamel of a single shade, which, when fired, has entirely filled the cloisons. In this enamel, when cold, there have been dug by a wheel, or other instrument used for carving precious stones, sometimes complete separations down to the copper, sometimes little excavations in the form of circles, roses, and other ornaments. A new enamel of a different shade has been fused into the spaces thus made."¹

This explanation affords a possible solution, by suggesting one way in which the result could have been arrived at; but it is much more likely that the patterns were formed by putting in juxtaposition finely powdered enamels of different colours, as can be easily done, and then fusing them all together.

M. Darcel, in his notice on the enamels and

¹ "Note on the Enamels in the Louvre," p. 28.

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jewellery in the Louvre (1891), suggests another method, which is perhaps more feasible, but which would indicate a degree of workmanship higher than that possessed by the Gauls. He says: "The ornaments introduced into the middle of the enamelled fields which fill the spaces in the fibulæ seem to me to be formed of cylinders of filigree glass, such as the ancients knew how to make, and the practice of which was rediscovered by the glass-workers of Murano in the sixteenth century." The process he alludes to is the foundation of that sort of Venetian glass-blowing which is carried on to this day, which consists of variegated stripes or dots of coloured glass. A number of thin rods of glass are first drawn out of a mass of melted glass. They are of various thicknesses, from one-eighth of an inch downwards. They are then arranged in bundles, so that when you look at the arrangement endwise, you see a pattern, as, for instance, a flower. They are then melted together into one rod, which thus becomes something like the composite sugar-sticks of our infancy. Short lengths are broken off this rod and used as tesserae in a sort of mosaic, which is again melted by heat, and fused on to the body of a glass vessel. Sometimes, again, rods are made of opaque white and transparent glass mixed together. Then they are fused into one rod, and twisted into spirals and then flattened. Then they are heated, and joined round and round to build up a wineglass or bottle. The effect is that of a sort of lace pattern in opaque white on transparent glass.

Certainly, however, if I had to imitate these Gaulish enamels, I should take none of all this

EARLY GAULISH ENAMELLING

trouble. I should make thin little cloisons of the shapes required, put them on the surface to be decorated, fill them up with different sorts of powdered enamels, let the powder nearly dry, press it firmly down, and then gently withdraw the cloisons, leaving the powders in close juxtaposition. They would then be gently pressed so as to meet one another, and the whole would be fired without the least difficulty. M. Darcel gives reasons derived from an inspection of broken enamels of the period, and it is probably impossible to determine which of the three possible ways of executing these enamels has been actually followed. Certainly the fact adduced by him, that there are two pieces, one in the British Museum and the other at Rouen, ornamented with vine leaves of a precisely similar pattern, makes much for the view that they were executed with pieces of a manufactured rod.

I may, however, point out that a little pattern cloison such as I suggest might be used by a workman over and over again, and would give even greater uniformity to the work than the suggested compound rods of glass. Besides, my plan could be executed anywhere and by anybody. M. Darcel's requires the resources of a glass-blowing furnace. M. Laborde's requires the use of a lapidary's wheel.

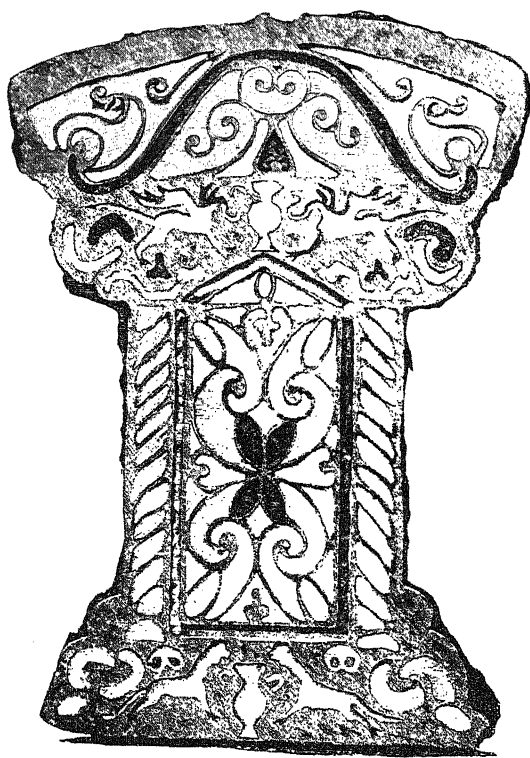
Gaulish enamels of similar character are found all over Europe. MM. Bulliot and Fontenay even found a workshop where the enamels had been made at Mount Beuvay, near Autun.

Many specimens have been found in the Crimea, others in the Caucasus, others again in Scandinavia. Pieces of horse-harness appear to be the most

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common, but brooches, and even boxes, are also found.

A specimen that was got from the bed of the Thames, and is now in the British Museum, is reproduced here.



ENAMELLED ALTAR, ROMANO-BRITISH
FOUND IN THE THAMES

CHAPTER IV

BYZANTINE ENAMELS

THE foundation of the city of Constantinople, and the transference thither of the principal seat of government of the Roman Empire, gave rise to a new form of art. Like all other forms, it was a development of already existing ideas, but the new elements introduced so profoundly altered them as to result practically in a new creation.

This art, known as Byzantine, penetrated Europe and exercised very considerable influence upon mediæval Gothic. It is not difficult to recognize the Byzantine style, or modification of it. But it is very rash to conclude that any piece has been made by Byzantine workmen merely because it bears a Byzantine form. A German or Frenchman could easily be trained in Constantinople, and acquire a thoroughly Byzantine style. Again, from the fact that Byzantine or any other kinds of enamel now exist in any locality, it is very illogical to conclude that the work was done in that place, or even in that country.

What, for instance, is more probable than that Greek jewellers should have left Constantinople and come to work for some of the kings of the

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West? Their work would remain Byzantine in character, though done perhaps at London or Paris. If we did not know that the Pala d'oro had been made at Constantinople, we might have imagined it the work of Venetian jewellers. The place in which such a thing as an enamel is found is really no proof whatever of its origin; on the contrary, articles of rare foreign workmanship are apt to be the most prized. Who, from an inspection of an English drawing-room, with its china, its Swiss wood-carving, Turkey carpets, French clocks, Japanese screens, and Indian boxes, could get an idea of English work?

Fortunately, sufficient evidence exists of the existence of a Byzantine school, to which definite works of arts can be traced to enable us not only to recognize Byzantine work, but to describe its chief peculiarities. Briefly characterized, it is classical art subjected to Oriental influence, and then moulded into form by Christianity.

In order to understand the characteristics of Byzantine art, we must consider the sources from which it sprung.

When Constantine founded the new Byzantium, in 330 A.D., he collected within the walls of the city all the masterpieces of Greece and Rome on which he could lay his hands. This resulted in an assemblage of everything that could inspire the genius and cultivate the tastes of his artists. It is therefore not surprising to find that Byzantine work is founded on classical models. An examination of the ivory figure illustrated will demonstrate this clearly. It represents an angel in Roman dress, with wings and sandals, standing on a flight of steps



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under a canopy. The mode of wearing the cloak, the folds of the garments, the general treatment and feeling of the later work, clearly shows that it is a development of the art of Roman times.

Or again, compare a painting from the walls of Pompeii with some rude effort of early Christian art from Rome or Egypt, and it will at once be evident that Christian art was only a development of classical art.

In one case (at Ravenna) a Byzantine painter has in a picture of the Baptism of our Lord actually represented the Jordan as a river-god crowned with weeds.

Although Byzantine art was undoubtedly founded on Roman models, it was largely influenced from other sources. In the first place it was profoundly modified by Oriental art, especially that of Persia. I do not know that any attempt has been made to trace the sources of ancient Persian art. It seems to me to have been largely influenced, if not actually derived, from the art of ancient Assyria. The curious birds and winged beasts one sees resemble the Assyrian demons and guardian angels. It is difficult to find specimens of them now, because after Mohammedanism was introduced, all objects that could be found which portrayed the living form of men, or gods, were destroyed. Hence the Persian and Arabian art of to-day is not the same as that which was admired and assimilated at Byzantium.

In his magnificent work on Byzantine enamels, Kondakow states his opinion that cloisonné enamel came from Persia, but he gives no proof of this assertion. I am much more inclined to think it

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came from Egypt. We know that the Egyptians used cloisons for enclosing and setting precious stones, and were very familiar with enamels. It is not unlikely that an artificer should, instead of stones, stoop to fill up the cloisons with enamel.

But the effect of Persian art upon the art of Byzantium is undeniable. The cusped arch of double curvature, so characteristic of Persian art, is repeatedly seen in Byzantine art, and leaves no doubt of the existence of Persian influence.

Indeed, this influence was only to be expected. From its geographical position, Byzantium became the door through which the products of the East were exchanged for those of the West. Costumes began to be embroidered, emperors and empresses wore strings of brilliant jewels, instead of the plain rings with which the Romans had been content. Silks were introduced of transparent texture, so as to show the skin and limbs beneath them. Earrings were worn, and huge fans were made of the plumes of birds. Large uncut jewels were sewn everywhere over the dress, and on high occasions distinguished persons prided themselves on shining with gems like the sun.

In the tenth century the throne of the Byzantine Emperor is described as being surrounded by trees, on which were mechanical singing-birds and lions of metal, which roared at the spectator's approach. During an audience music was performed by a mechanical organ ornamented with jewels, and the Emperor himself was lifted up from the floor to the roof by a mechanical contrivance, like a fairy in a pantomime. (See Linas and Labarte.)

But austere work had departed. The spirit

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which could delight in a chastely cut Greek or Roman cameo had given place to a love of what was gaudy and full of colour. And Eastern manners had also come in. We do not read that in ancient Roman times inferiors knelt to their superiors, even although the power of fathers over their sons, and masters over their household, was supreme. The slavish practices of kneeling, or grovelling, on the earth, are never seen in classical sculpture. They were introduced into Europe from the East by way of Byzantium. The Romans, indeed, compelled submission with an iron will, but it was reserved for the Byzantines to delight in exhibitions of self-abasement. In recent years those who have seen such a play as Sardou's "Theodora," magnificently placed on the stage with the greatest archæological accuracy, will find no difficulty in forming an idea of the art and dress of the time of Justinian.

The new spirit which Constantine introduced into Christian art is well exemplified by the representations of our Saviour. In the catacombs at Rome He appears without a nimbus as the good shepherd, or in the allegorical form of Moses striking the rock. But at Constantinople He is seated on a throne of gold and precious stones, in the proud attitude of a king surrounded by hosts of angels, principalities, and powers, and with a nimbus on His head—the symbol of power—He is represented as ruling the earth. Kings grovel at His feet, supported on their knees and elbows, no doubt the Byzantine mode of approaching the Emperor.

So much for the Oriental influence. The other influence of which I spoke was Christianity. During the earlier Christian centuries the work of the

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Church chiefly consisted in a protest against the immorality and luxury which then pervaded the world, East and West alike. Monasticism was a sort of total abstinence movement. The good that it did is incalculable. It is impossible to read the lives of the early monks of the East, who lived in Syria or Egypt, without being struck by the tone of lofty morality that pervades their writings. Their adherence to truth, their scorn of wealth and worldly dignities, their open rebukes of sin, to be silenced neither by bribes nor persecution, laid the foundation of the future power of the Christian Church. But their asceticism made them bad patrons of the arts. The Greeks and Romans had glorified the body. The Greeks delighted in the nude form. On certain ceremonies, in parts of Greece, youths of both sexes took part in processions almost without clothing, and in later times the exquisites of the declining Empire spent hours of the day in the bath. Quite an important part of the work of Pliny is taken up by receipts for various unguents and perfumes. And in Art the same admiration for the human form is to be found. The gods were always represented, almost, if not entirely, naked, and ancient statuary demonstrates the accuracy with which Greek sculptors studied nude form.

It was part of the reaction against the effeminacy of the ancient Roman Empire that the monks should despise the body. They regarded it as the source of evil, as unworthy of care. They emaciated it by fasting, they lacerated it with whips, probably if they could have prevailed they would have forbidden its representation.

As it was, in Byzantium from time to time

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iconoclastic reactions caused the destruction of images, and sometimes the savage punishment of artists.

The second characteristic of the early Christians was mysticism. Everything was made a type, or a symbol. The very letters of the alphabet were turned first into signs, and then into formulæ by which angels and spirits could be conjured. Mystic numbers, magical names, which had exercised so strong an influence over the Chaldæans and the Egyptians, were revived, and the symbolism which afterwards became one of the leading characteristics of Gothic art may be traced to this source.

This mysticism led, not only to the use of symbols, but to the severest conventionalism. In fact, wherever any exclusive form of religion dominates art, it is certain to impose the strictest conditions.

It had been so in Egypt. One can see many traces in ancient Egyptian art of a desire to escape from rigid bondage, and to be natural and realistic. There are several portrait statues which exhibit this tendency, and if any vestiges had remained of the ancient palaces, we no doubt should have been in possession of other examples.

But almost the only part of Egyptian art that we know is religious art, and here each god has his appropriate attitude, colour, clothing, and emblems, to depart from which would have secured the immediate destruction of the work and punishment of the daring artist.

In Byzantium precisely the same restrictions seem to have existed. Didron has shown that up to modern times in the Greek school of painting,

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the dress, attitudes, likeness, and even the colour of hair and eyes, was precisely fixed for each saint or holy personage. The representation of scenes was minutely arranged and made rigorous, so that each picture of any given event was like all others. The baptism of our Lord, the rising from the grave, all became stereotyped, and minute rules were laid down for the arrangement of the figures and accessories. The Council of Mera formulated an edict as to the mode of painting sacred subjects. This, of course, precluded naturalism and drawing from models, and tended to render the figures dry, hard, and stiff.

Therefore in Byzantine art we may expect to find a classical foundation, modified by Persian influence, at the same time the subjects symbolically and conventionally treated, with but little feeling for the joy of life, and a total exclusion of the nude figure, except in such scenes as the crucifixion, where the text of the New Testament expressly seemed to render its representation necessary. At the same time the drawing would be hard, dry, and inelegant. The art would be a compound of classical and oriental, profoundly impressed with asceticism and mysticism. This is exactly what we do find. No sort of expression is given to the face. The eyes are goggle, the mouth expressionless, the drapery is ropy. On the other hand, the vast areas of domes and walls and floors were filled with mosaic pictures of grand conception and design. The artists were in earnest. They believed in a heaven and in a hell, and in the speedy coming of our Lord in judgment, and the rigid conventionalism of their drawing is more than com-

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pensated by the intensely religious tone of their work.

Here again, however, what we possess has come down to us almost invariably because it has been part of the ornament or treasure of a church. And therefore we know very little of the purely secular side of Byzantine enamelling.

The most important examples of Byzantine work now existing are the Pala d'oro at Venice, and the reliquary at Limburg on the Lahn (a town about thirty miles to the east of Coblenz). There are other works of less importance in Rome, Prague, Cologne, and in various museums. They were almost invariably executed in cloisonné. In earlier times the gold employed was generally very pure, but the quality gradually deteriorated. The Pala d'oro, in St. Mark's, at Venice, is a square altar-covering about eleven feet long by four and a half feet high. An inscription relates its history. It was owned at Byzantium by the Doge Pietro Orseolo. In 1105 it was made larger by Greek artists living at Venice. About a century afterwards it was reconstructed under the Doge Pietro Zani, and finally was completely remodelled in the fourteenth century under Andrea Dandolo. Of course, these changes have altered the character of the work. It is now no longer pure Byzantine; it is largely Gothic. Hence its value as an example of Greek-Christian art has been depreciated. But it is a fine work. One must not expect of it that realism to which our eyes are accustomed. To please us, it is necessary that saints and Madonnas, even when enthroned in the glory of heaven, should show the realism of the earth. We like to be able

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to tell whether the robe of an angel is made of wool or of flax, and to admire the details of his wing-feathers. But as symbols of holy mysteries, these rude and even grotesque figures have a very solemn appearance. The Pala is divided into five parts. In the centre is Christ in glory with a number of precious stones, seated on a gorgeous throne. The compartment in which He is placed is interesting from its shape, which is Persian in character, as is also the compartment above His head, in which are the symbols of the Holy Spirit. Round Him, in four circles, are the evangelists. The rest of the Pala is devoted to scenes from the New Testament, those from the life of St. Mark, the patron saint of Venice, being the most numerous. The Virgin finds a place, as also an Empress and an Emperor, who has been transformed into a Doge.

In 1849 the Pala was again restored, and acquired its present form. It is undoubtedly the most interesting Byzantine enamel in existence, though its repeated restorations have somewhat impaired its historical value.

The reliquary of the wood of the true cross at Limburg is, unfortunately, not very easy of access, owing to the religious views of those in whose custody it is, but it is one of the most important Byzantine works in existence, because it dates from the finest period of Byzantine art.

It was executed about the year 950 A.D., in the reign of Constantine Porphyrogenitus, and brought to Germany after the sack of Constantinople in 1204 A.D. It consists of a large picture about eighteen inches high, in a box with doors. On the outside are figures of our Lord, the Virgin Mary, St. John,



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and the archangels Michael and Gabriel, and of the apostles. These are executed in cloisons on a raised background of gold. Inside are other figures surrounding a cavity containing some of the wood of the true cross. The patterns are most beautiful, and are of extreme interest because they are prototypes of the patterns which one sees in later French and German painted windows. The similarity of the designs, for instance, to those of Chartres can hardly escape notice.

In dealing with Byzantine enamels one ought not to omit to mention the treasure at St. Mark's at Venice. It is what remains of the share of Venice in the plunder of Constantinople by the Latin Crusaders in 1204. Readers of Venetian history will remember the arrival at Venice of the horde of ruffians bent on plunder in the name of religion. The Republic lent some ships to them, and tried to utilize them in making conquests for her benefit. Arrived at Zara, they encountered a wretched fugitive claimant to the throne of Constantinople, whose cause they espoused mainly through the influence of the Doge, Henry Dandolo, who had a score to settle with the Emperor, by whom his eyes had been treacherously put out when on an embassy. The sack of the city destroyed objects of priceless interest, and scattered the relics of Byzantine art over Europe. Pieces of the true cross and bones of saints of the Oriental Church acquired at that period are to be found in many cathedrals; and Venice got her share. The treasure of St. Mark's is especially interesting. In the foremost place is the splendid book-cover representing the archangel Michael, one of the militant

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angels whom the Byzantines were especially fond of representing. The work is repoussé, covered with enamels of all colours. The background is, as usual, scattered over with crosses and flowers. The borders are ornamented with precious stones and with other figures.

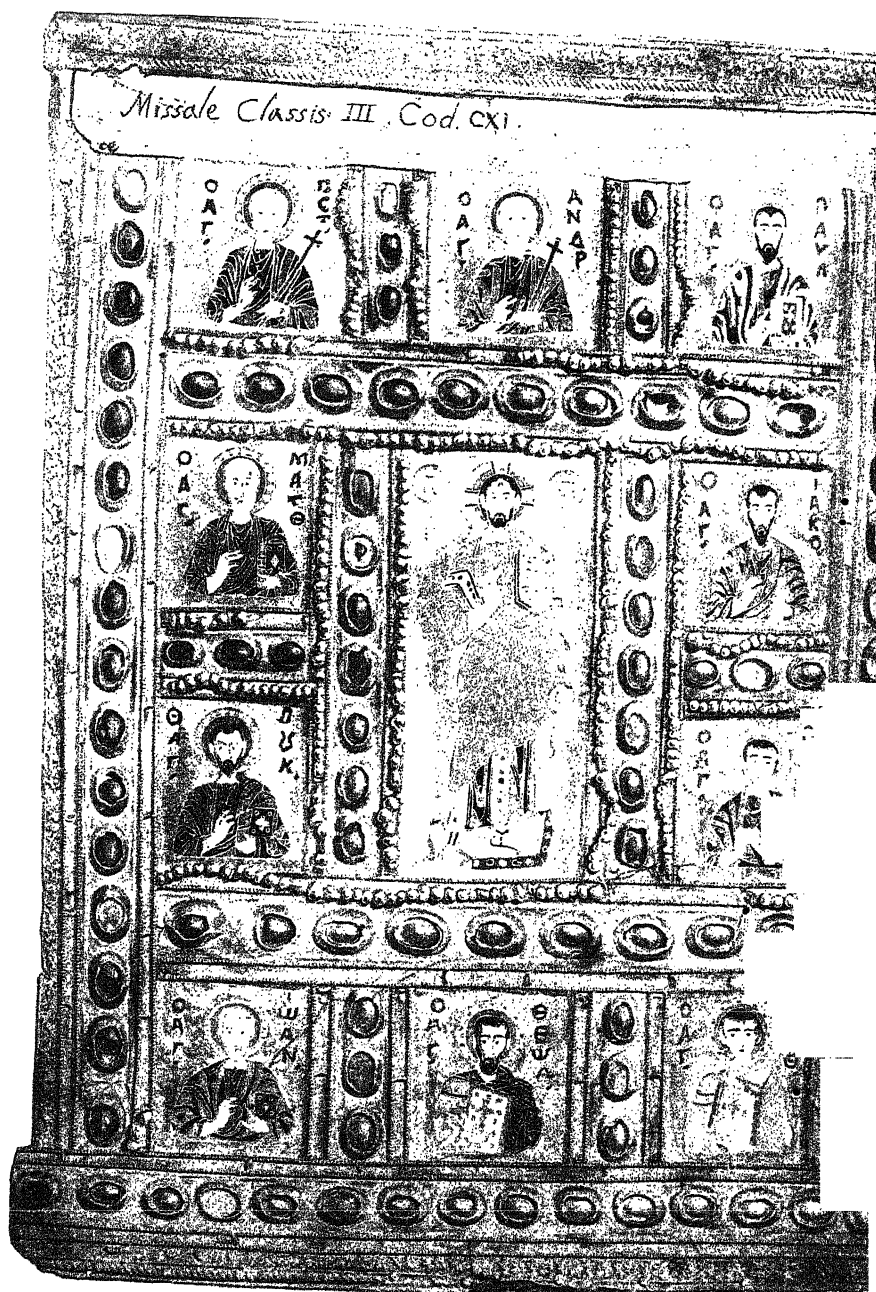
Every critic has spoken with admiration of this fine work, and of the harmony and brilliance of the colouring. Perhaps there is a tendency to exaggerate its artistic merit. But it is worth a journey to Venice to see. There are in the treasure also crystal cups, with enamelled settings, among which are placed strings of pearls.

Pieces of Byzantine enamel are to be found attached to crucifixes, reliquaries, and personal ornaments, executed in much later times.

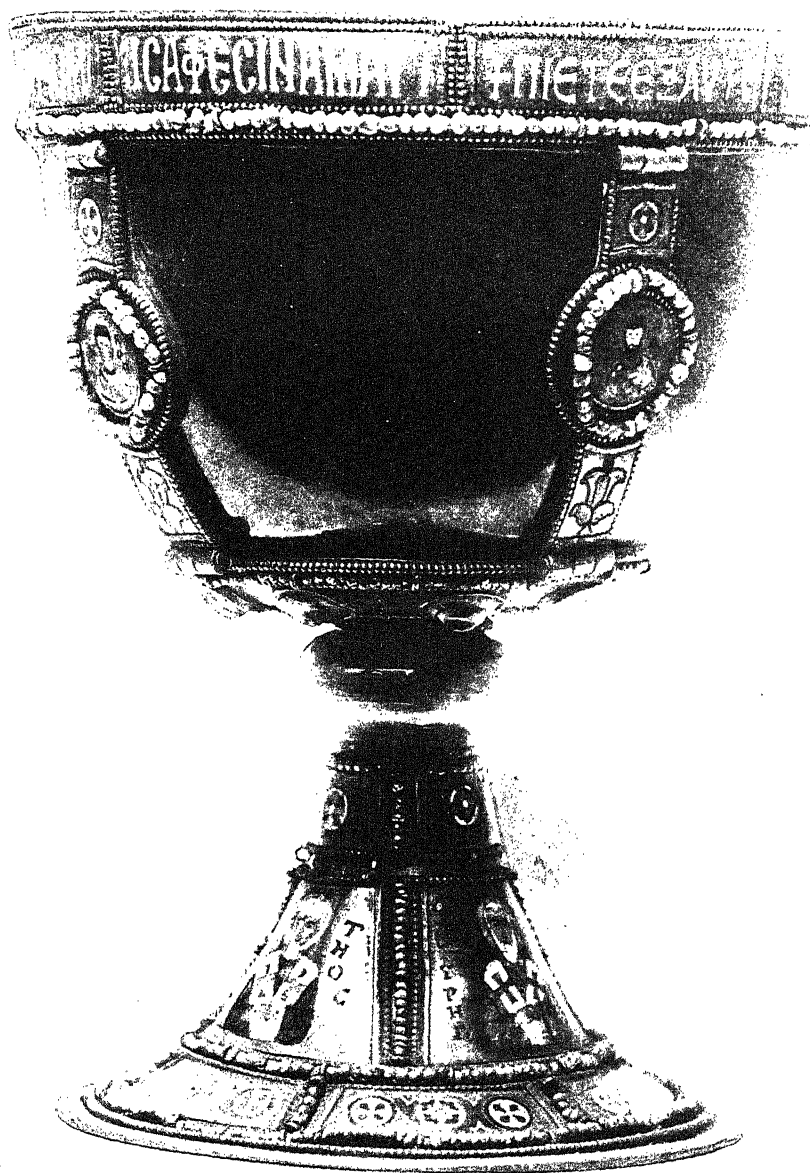
St. Mark's treasury contains two other book-covers well worthy attention. One of them is unfortunately damaged, the rows of seed pearls which surrounded the figures being mostly destroyed. The figures are in fine cloisonné let into plates of gold, so that the flat gold forms a background.

In the centre is Christ holding up the right hand, with the first two fingers extended in the Greek fashion, and holding in the left the Gospels. He is surrounded by half-length pictures of ten of the apostles, the four evangelists being immediately round Him.

Another book-cover is in better preservation, and represents our Lord in a dark blue robe, in full length, in the regular traditional attitude, with half-length portraits in circular medallions around Him. The archangel Gabriel is above, and various apostles are placed round. The backgrounds are



BYZANTINE BOOK COVER IN THE TREASURY OF ST. MARK'S, VENICE



SARDONYX CHALICE MOUNTED IN SILVER, ENAMELLED AND GILT,
IN THE TREASURY OF ST. MARK'S, VENICE

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all of plain gold, surrounded by strings of seed pearls.

A fine reliquary of the true cross, of Byzantine work, eleventh century, is in the cathedral at Gran in Hungary.

On each side of the recess for the relic is a representation of the Emperor and Empress. Below are scenes from the life of Christ; above are arch-angels.

A Byzantine chalice in sardonyx, mounted in silver, is in the treasury at St. Mark's. Round the rims are written the words of consecration of the wine. The date is about the eleventh century.

The Emperors of Byzantium were in the habit of using jewellery as a means of official communication. Their most important letters were sealed with golden seals. They used also to send to their tributary kings hats or "stemmæ," decorated with plates of gold. These are the origin of modern crowns. Part of one of them survives the destruction of ages, and is in the museum at Pesth. It was found buried in a field in Hungary. There are six plates of gold enamelled in cloisonné, rounded at their upper ends. They were sent by Constantine Monomachus to the King of Hungary in the eleventh century. There is a figure of the Emperor, also the virtues. Among them Truth and Humility are conspicuous, of which the Emperor very probably wished to put the king in remembrance. There are also two dancing figures, Oriental in appearance, surrounded by crosses and curious birds. It is very probable that these crowns or hats of ceremony were not intended to be worn or used, but were insignia of office, like the baton of a field-marshal,

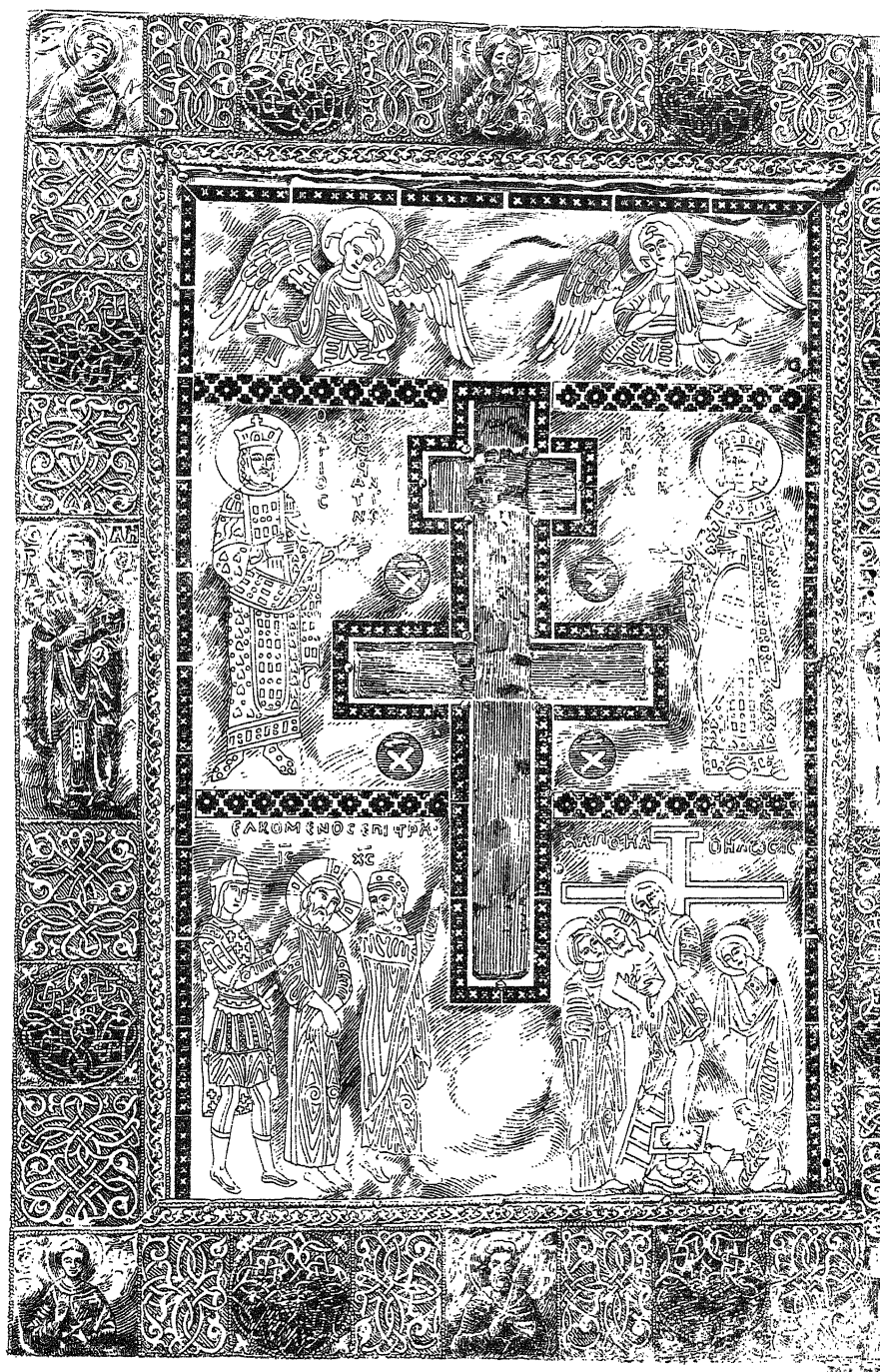
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and therefore the manufacture became somewhat a matter of routine, like our Court ornaments and orders, and the crowns and robes of peers which, considered as works of the jeweller's art, are usually very trumpery affairs, and designed more with a view to cheapness than to artistic value.

The cross sent by the Emperor Justinian to Saint Radegonda is a typical example of Byzantine work. The cross is a double one, surrounded by square emeralds fastened into a gold setting. The space round them is filled with cloisons in patterns of ornamental branches, with red flowers at intervals. The ground is turquoise blue. It is supposed to date from the sixth century.

The splendid collection of Herr Albert von Oppenheim at Cologne contains many interesting pieces, among others one of the most charming Byzantine enamels in existence. It has been carefully kept, and thus, though it is probably 1300 years old, it looks almost as fresh as if it had just left the workshop. It is a small, book-shaped reliquary, about four inches long by three inches wide, of silver, overlaid with beautiful cloisonné enamels representing a crowd of saints. The colours employed are two beautiful shades of green, opaque light blue, transparent dark blue, a brownish transparent red (which was all the Byzantines ever could do in enamel), and opaque white. The harmony of colour and taste is exceedingly good. The lettering is done in gold cloisons standing in a coloured ground.

Having thus briefly reviewed the chief characteristics of Byzantine art, it remains to inquire whether it can be termed original or a development. This



RELICUARY OF THE TRUE CROSS AT GRAN, HUNGARY, XI CENTURY

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question has been continually discussed by antiquaries, not only with respect to Byzantine art, but with respect to Italian Carlovingian and Gothic. Before this question can be answered, one must inquire what is meant by "original." In one sense Shakespeare is one of the most original geniuses the world has ever seen. In another sense, neither he, nor Dante, nor Milton, nor Cervantes, nor Giotto, nor Raphael, nor Michelangelo, are original. If by originality is meant the presentation of new ideas, then Byzantine art was highly original. It grafted Persian art upon old classical styles, and breathed into the compound a totally new religion, philosophy, and idea of life and death. But its elements were as old as was the English language when Shakespeare wove into it new forms of beauty. Search through Byzantine art, and where will you find a single form that is not a development of what has preceded? The pillars with their capitals, the rounded arch, the mosaic pavement, are all old. The dress of the personages is only an adaptation of the Roman toga or the Greek peplos. The attitudes are only those of the statues of Greek and Roman celebrities; the ornament, even when most florid, has been clearly suggested by the beautiful scroll-work of later Roman times, which, in its turn, was only developed from Greek models. Thus, then, all is new, while all is old. No artist dares use a set of totally new symbols, even to clothe the most daring new idea. It would be to speak in an unknown tongue. And thus through the history of art we shall find the same phenomenon — new religions, new social and philosophic ideas, breathing new life into old forms. Sometimes the old

forms are so dead and decayed that the new wine bursts the old bottles, and both are lost. But art, ever eternal—ever seeking to suggest by concrete images the hopes, loves, and desires of man, gropes round for any symbols he will understand, and is constantly employed in creating new combinations of old elements.

Of course, every step in progress is a change—in a sense, every new style is original. But to those who will look, the progress can be traced from age to age as surely, nay, much more surely, than the comparative anatomist can trace the affinity of all types of animal life. For, though robbers and conquerors have mutilated so much that was beautiful, we still fortunately possess the remnants of the missing links. In this we are more fortunate than the osteologists, for we are not quite condemned to deal with petrified skeletons. A little flesh still hangs round the bones—a little paint still adorns the faded outlines of the ancient frescoes; occasionally a delightful Greek coin or bit of gold-work is turned up fresh as when it was made, and in an instant reveals the influence of Assyria. Another connects Greece with Egypt—another unites the art of China with that of Thibet and even of Chaldæa. All of them illustrate the truth, that though philosophic thought may sometimes proceed by cataclysms, Art usually progresses by insensible gradations, the most original artists, the Turners, the Holbeins, the Velasquez, being obliged, even in their most inventive moods, to speak, at least to a large extent, the art language of their day.

I shall say a few more words on the practical application of this interesting topic when I come to

BYZANTINE ENAMELS

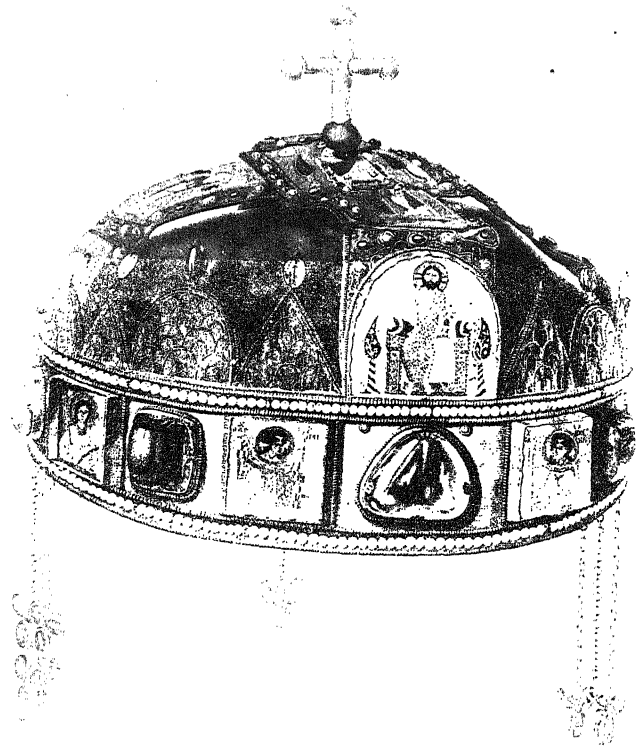
examine the influence of Byzantine enamels upon Carolingian and Gothic art.

It has been said that Byzantine art appears to us very conventional. But it was not conventional in the eyes of contemporaries. The pictures were expressly designed for those who could not read, as St. Nilus tells us. St. Asterius, describing a picture of the tortures inflicted on St. Euphemia, says, "But here I melt into tears, pain extinguishes my voice, for the painter has so clearly rendered the drops of blood that one sees them flow, and weeping turns away." And in the ninth century a painter called Methodus was summoned to the Court of Bogoris, King of Bulgaria, where he painted such a terrible picture of the tortures of the damned in hell that the king was converted to Christianity.

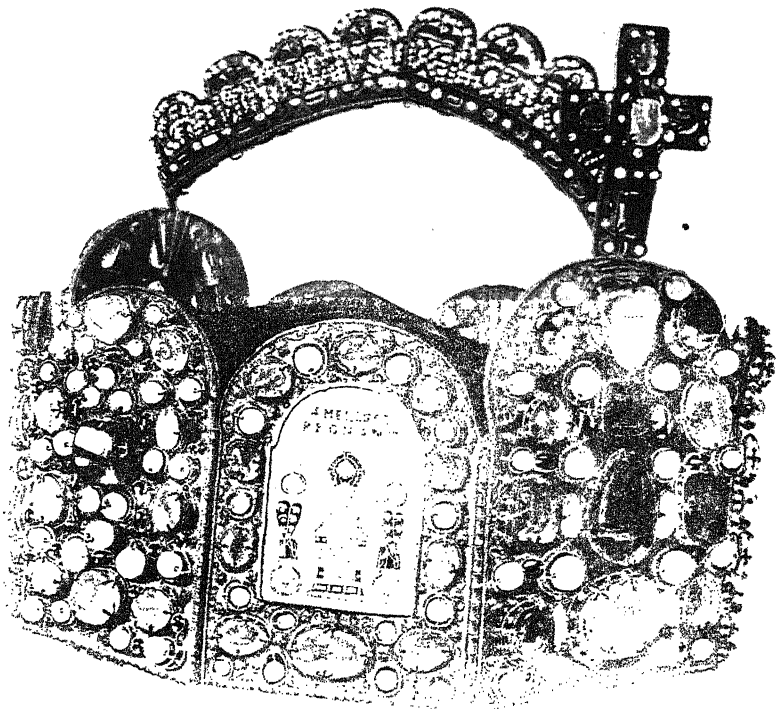
CHAPTER V

MEDIÆVAL ENAMELS OF THE CARLOVINGIAN PERIOD, AND THOSE SUBSEQUENTLY MADE UP TO THE FOURTEENTH CENTURY IN GERMANY, FRANCE, AND ITALY

DURING the first part of the Christian era there was but little art in Europe except the Byzantine art that has been described. The ornaments that existed were mostly imported from the east. These times, occasionally called the dark ages, witnessed the emergence of the Gothic tribes from barbarism and their conversion from Paganism to Christianity. At the commencement of the period, the most civilized parts of Europe belonged to Rome, and were governed by Roman officials, and kept in subjection by Roman armies. But as the imperial power declined, the soldiers were withdrawn, and the country lapsed into barbarism. It was a time of disorder and chaos. The idea of a state hardly existed. Here and there powerful warriors succeeded in becoming chiefs at the head of bands of soldiers, and the peasants and traders were obliged to join and become their men, in order to secure safety. Thus arose the feudal system. Christianity was gradually introduced by earnest missionaries from Rome, and was one of the chief factors



THE CROWN OF HUNGARY



MEDIÆVAL ENAMELS

in the promotion of civilization. As the public security became greater, especially in the reign of Charlemagne, learning and wealth began to advance, and at length a desire arose for some form of art. In this chapter it will be our object to study the results of this desire, up to the end of the fourteenth century.

But before we do so, it may not be out of place to offer a few observations upon the manner in which the thought and aspirations of any period influence the artistic work that is done in it. A painter, or decorator, like an orator, though he must be inventive, is not necessarily, nor indeed is he usually, a man of original mind. His strength lies in his power of acutely sympathizing with and giving expression to the feelings of those around him. If he is living among people who are constantly discussing religious mysteries, and who employ him to paint religious pictures, he will naturally reproduce the feelings of those who have influenced him, and though by no means personally a man of deep religious feeling or moral life, he may become a great religious artist. The very fact of his receptivity for the current feelings of his time will make his works sought after. More profound power of thought and originality will injure his chance of employment and recognition, at all events in his own time. And therefore, whenever we find a change in Art, we may invariably trace it to a change in religion, philosophy, or morals. The art of a period is only a phase of the thought of that period, and every fresh development of thought is reflected and expressed in architecture and painting, as well as in literature. Thus, then, the beautiful

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religious art of the Rhinelands, which showed an almost unbroken progress from the time of Charlemagne, was the result of the Carlovingian literary revival. The splendid outburst of architectural art in France, which, about the middle of the thirteenth century, spread to Germany and to England, was a product of the great revival of religious thought brought about by Albertus Magnus, St. Thomas Aquinas, and the founders of Catholic theology. The art was steeped in symbolism and mysticism and ecclesiastical philosophy. The outside of the Cathedral at Chartres is an attempt to render in stone a general view of human knowledge, such as it was represented in encyclopædias like that written by Vincent de Beauvais. Among a people who could not read, but were eager to learn the facts of sacred history and the lives of the saints; windows, statues, pictures, and shrines, instead of being the meaningless ornaments they are to us, were picture-books, full of instruction, and every effort was made to render each church a complete pictorial record. We have it from the memoirs of the times that knights would spend hours in the contemplation of these pictures, of which many cathedrals contained thousands. Those versed in history knew the different characters. The various orders and hierarchies of angels and principalities and powers, rising tier above tier, which we wonder at and admire in some church window, or in the magnificent attempt to represent heaven by Francesco Botticini in our own National Gallery, were no mere painter's fancies. The plan of it all is to be found in the works of St. Denis the Areopagite, which St. Thomas Aquinas incorporated into his system of theology, from

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whence it passed into common knowledge. The representation of God as a man, at which modern writers sometimes cavil, was only in obedience to the words, "Let us make man in our own image." To those interested in these questions, Didron's "Christian Iconography" is very useful, and Mrs. Jameson has also put much information in a popular form.

It is difficult for us, who read the daily papers and magazines, even if we do not read our Bible, to realize with what delight an intelligent man in those days who could not read saw for the first time a picture representing such a subject as the Virgin enthroned, surrounded by saints and martyrs. It must have brought home suddenly to him some of the intense pleasure which in these days we feel on the perusal of a beautiful poem. No picture painted now can possibly be to us the revelation and inspiration that a great religious picture must have been to a pious believer of those times. And this must be constantly kept in mind if we wish to obtain pleasure and profit from the contemplation of mediæval works of art.

Usually the modern educated tourist only regards the drawing, the colour, and the composition. He rarely takes the first essential step of reading up the story which the picture is intended to illustrate, still less of mastering sufficient of the theology of the time to appreciate the point of view from which it was painted, and the purpose it was intended to serve.

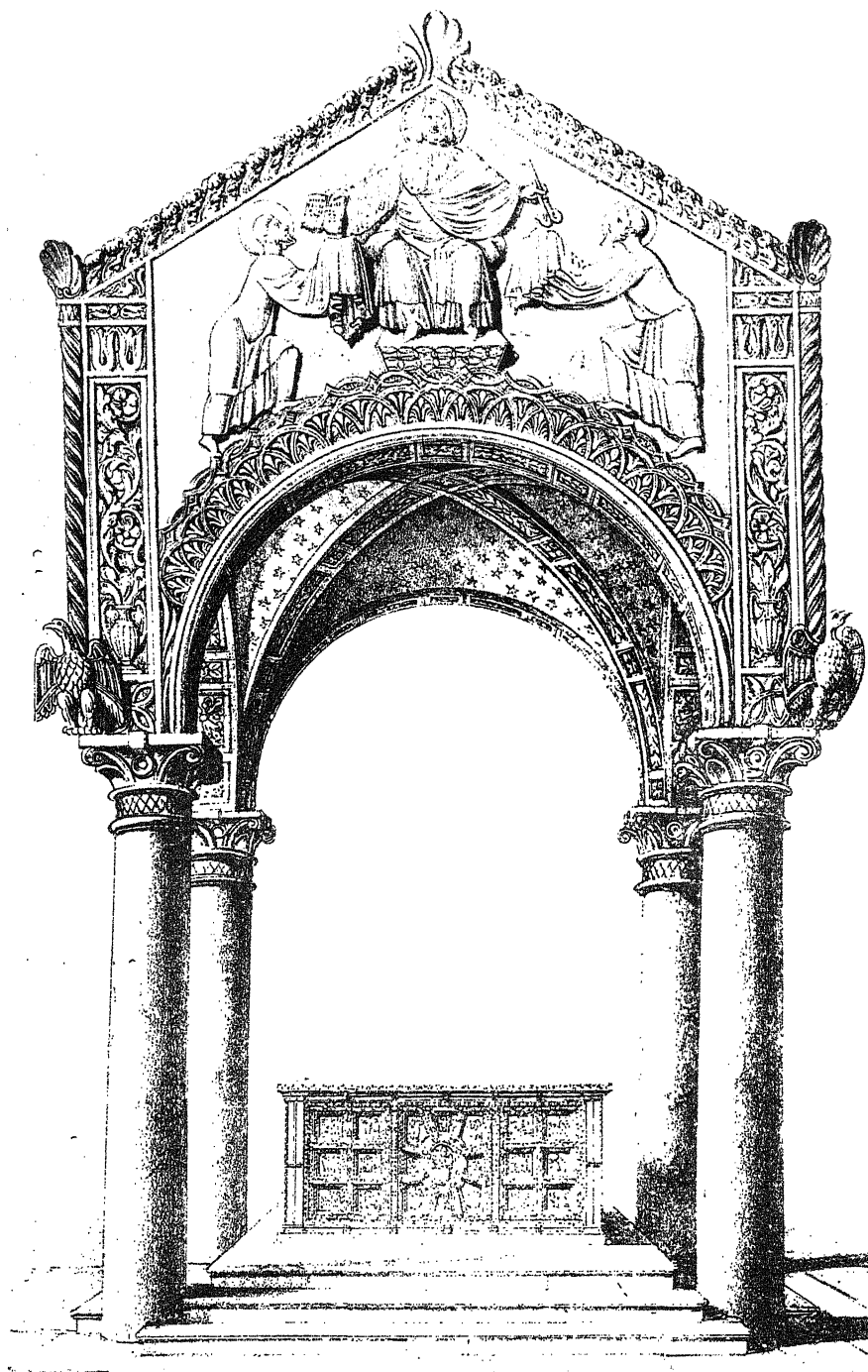
Therefore it should never be forgotten that early enamels were intended and used primarily as real aids to devotion. Many a sincere tear has wetted

them; to thousands they have been the only available aid to the realization of divine things, and as such they demand our respectful attention, even though the design and execution be rude.

The period may be divided into four divisions, or rather into four schools. First the enamels of the time of Charlemagne and his successors, lasting from the eighth to the eleventh century. Then the German school of the countries lying about the Rhine, and the Meuse, of which Cologne was the centre, and which commenced about the eleventh century, and declined at the end of the twelfth. Next the French school, of which Limoges was the most active centre, and which, commencing about the eleventh century, lasted till the fourteenth. And finally we shall have briefly to mention the work done in Italy during the same period.

The reign of Charlemagne was the first dawn of a revived civilization for the west of Europe, and among the arts that were then recreated, enamelling took an important place. The movement existed in Germany, France, and Italy, but the characteristics of the art in all those places were very similar. The most distinct Byzantine influence is traceable, both in design and in methods of execution, leaving little doubt that the practice of the art was derived from Byzantium.

Many instances might be adduced of the actual copying, by German twelfth-century artists, of Byzantine work. Thus at Mettlach in the Catholic Church there is a large engraved metal plate copied in the twelfth century from a reliquary of the Holy Cross brought from Constantinople by Henry von Ulmen. The original is in the treasury of the



PALIOTTO IN THE CHURCH OF ST. AMBROSE AT MILAN

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cathedral at Limburg and another copy is in the church of St. Matthias at Trèves. The plate forms the back of a reliquary containing a collection of reliques arranged in rows like specimens in a cabinet of natural history.

The most interesting of the enamels of this period is the Paliotto, in the Church of St. Ambrose, at Milan. This beautiful work is partly repoussé silver and partly enamel, and displays very clearly the mixture of Byzantine and Italian influences. It consists of a four-sided altar covering, divided into compartments. In these are figures in relief of our Lord and the twelve apostles, and scenes from the New Testament and from the life of the famous prelate St. Ambrose of Milan. It is signed Wolvinus, and dates from the early part of the ninth century.

The enamels are cloisonné on gold with white, blue, and green. There is some transparent red, but this is probably garnets let into the work. There is no clue to the place of manufacture.

*One of the next most interesting of the enamels of the Carolingian period is the reliquary of King Pepin, now in the treasury at Conques in the south-west of France. In shape it is like a house with a steep roof. Wide borders of metal are on the edges, in which are large uncut jewels in clumsy settings. A crucifix occupies one side with the Virgin and St. John. On each side of the cross two windows have been made into the box so as to let its contents be seen. On the opposite side are two birds with highly jewelled and impracticable wings, very Byzantine in treatment. At the treasury at Conques there is also a very important

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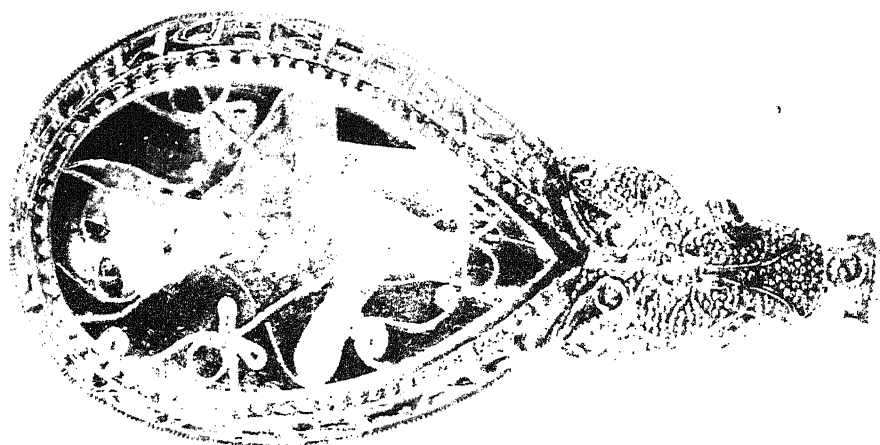
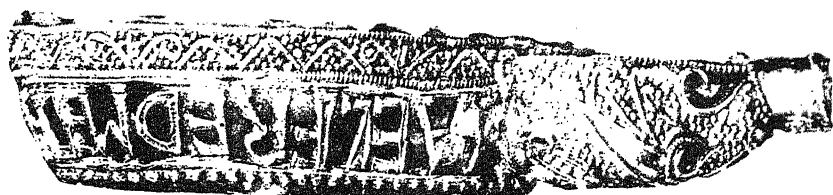
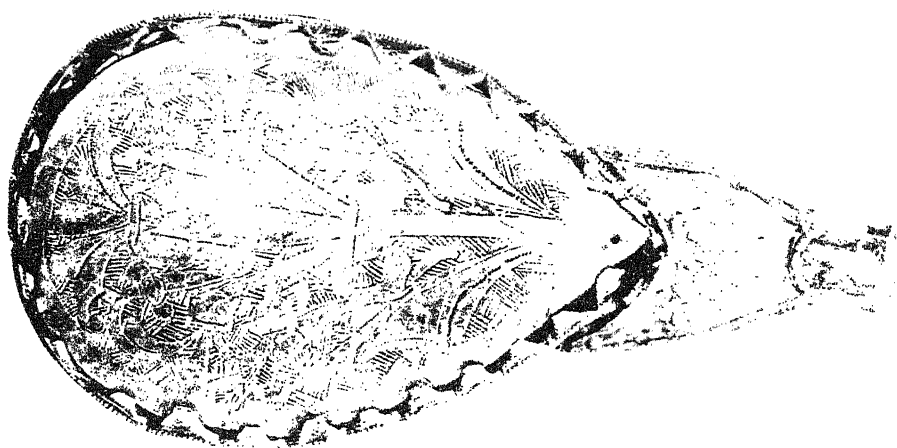
statue of St. Foy, the patron of the abbey. The saint is seated with extended arms, clothed in a robe covered with small repoussé ornaments. The eyes are in white and blue enamel.

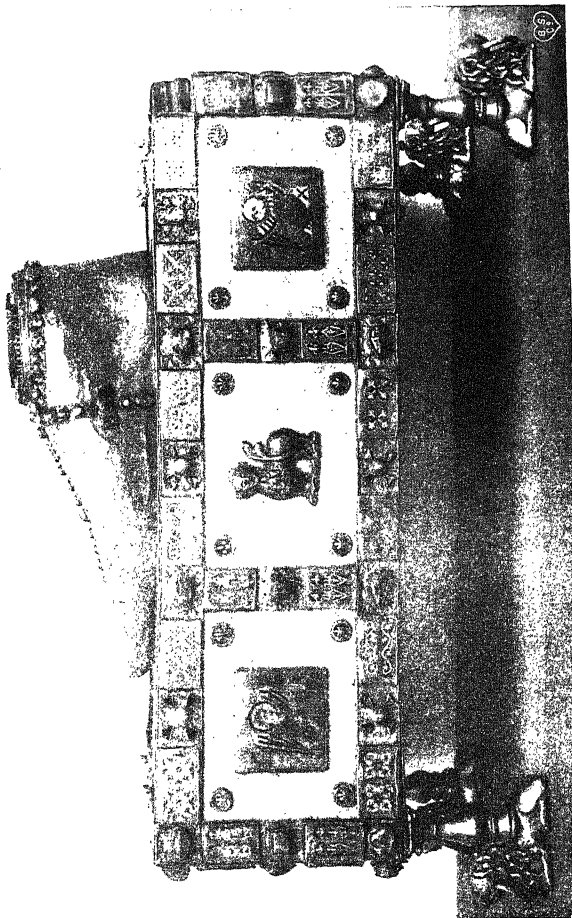
The jewel of King Alfred in the Ashmolean Museum at Oxford appears to me also to belong to this period. It bears an inscription on the setting, saying that the king commanded it to be made. This, I think, must refer to the enamel and not to the setting, and if so, indicates its period. It might possibly have been brought from Constantinople, but in this case such an inscription would hardly have been put on it. It seems to me more likely that some jeweller, who could make these things, happened to be at the Court of the King, and was specially directed to afford a specimen of his craft, and this would be a reason for recording it on the setting. This too would accord with the character of the King, who was interested in crafts. The workmanship of the jewel is not very good, and it is a thing that any one could make with gold, some coloured glass, and a few handfuls of charcoal.

On the other hand, however, even if the jewel were made for King Alfred, this by no means proves that it is of English manufacture, for he may have had it executed on one of his journeys to Rome, and mounted on his return.

And some distinguished archæologists are of opinion that the jewel shows signs of being of Celtic manufacture, possibly Irish.

A very interesting example of early Carlovingian secular ornament is to be found in the collection of Major Freiherr v. Heyle at Darmstadt. It consists of the personal ornaments of a princess, and is an





PORTABLE ALTAR OF ST. ANDREW
IN THE CATHEDRAL TREASURY, TRÈVES

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admirable example of the influence of the Byzantine style on European work of the eleventh century. One of the most remarkable pieces is a brooch consisting of an eagle within a broad ring. The head, body, wings, and tail are of enamel on cloisons of gold. The enamel is partly opaque, partly transparent. The colours are blue, green, and opaque red. Jewels are mixed in with the enamel, and the whole is set off with gold filigree.

The enamels are not simply laid on the body of the work, but are done on separate pieces of gold, and then burnished into or let into the ornament—in fact, treated as if each separate piece of enamel was a precious stone.

In the cathedral treasury at Trèves is one of the most interesting reliquaries of the tenth century, because it illustrates all the different modes of enamelling that are known to have been executed at that period. It is a portable altar, richly decorated with gold, and, on the top, a golden receptacle for the foot of St. Andrew. The enamels are, as usual, executed in separate pieces and mounted in the shrine. Some of them consist of pieces of crimson stone, with silhouettes of gold cut out and put over them. In other places, square garnets have been mounted in cloisons. These red stones are not of glass, because the art of making ruby glass was then unknown, and I am not aware of any instance of transparent red in an enamel of this date. All the enamels are transparent, except the white and the turquoise, which are opaque. On the sides are plates of burnished gold with cloisonné figures upon them of the four symbolic evangelistic animals. The taste and style are most characteristic. You see

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clearly the union of classical art with Oriental, while super-imposed upon both is a new influence which it is easy to recognize as the commencement of Gothic. The work is very Byzantine and yet clearly different from pure Byzantine art.

To the Carolingian period belongs the book of Theophilus, which is so interesting that a short extract from it may not be out of place. The work of Theophilus was probably written early in the eleventh century, perhaps about fifty years after the work of Heraclius. He was probably a German who concealed his real name under a pseudonym. The information in the book is so accurate, and the description of the tools and processes so true, that they could only have been given by one who had actually practised them. The second book contains a description of how to make glass and to paint it. The third (chap. LIV.) describes the method of making cloisonné. The author says: "You cut small bands of exceedingly thin gold, in which you will bend and fashion whatever work you may wish to make in enamel (electron), whether circles, knots, or small flowers or birds or animals or figures, and arrange the small pieces delicately and carefully each in its place, and fasten them with moistened flour over the coals." That is to say, the cloisons are to be stuck in their place with flour-paste, which is then gently dried by means of heat. "When you have filled one portion, you will solder (soldabis) it with the greatest care, that the slender and fine gold may not be disjointed or be melted, and do this two or three times till the separate pieces adhere to a certain extent." That is to say, solder them down here and there. "All having

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been arranged and soldered in this manner, take all kinds of glass which you had prepared for this work, and breaking a piece from each, put all the fragments on a piece of copper, each piece by itself, and, placing it in the fire, arrange the coals around and above it, and, blowing with care, you will see whether they melt equally. If so, use them all. If, however, any piece is harder, put it aside. Taking separate pieces of the proved glass, put them in the fire one by one and, when it is hot, throw it into a copper vessel full of water. It instantly flies into fragments, which you grind fine with a round pestle (*malleo*); you then wash it and cover it with a linen cloth. In this way you prepare different colours. Which being done, take a piece of the soldered gold and fasten it on a smooth table with wax in two places, and taking a goose-quill cut to a point as if for writing, but with a longer beak and not split, you take out with it one of the colours whichever you please." In fact, the quill is used as a little scoop, to scoop up the enamel. One of the manuscripts adds: "The enamel must be moist, and with a long slender copper instrument, and fine at the end, you scrape what you want from the beak of the quill, and fill up whatever flower you wish and how you please. That which remains over, replace in its cup and cover it. Do this with each colour till the piece is filled: then, taking away the wax to which it had stuck, put this piece upon a thin iron, which may have a short handle, and cover it with another iron which is hollow like a cup, and let it be perforated finely all over, so that the holes may be inside flat and wide, and outside finer and rough, in order to stop

the cinders if by chance they should fall upon it." No doubt in practice this cover was made by punching a sharp point many times into a piece of thin iron, so as to perforate it with holes, rough on the reverse side, like an old-fashioned nutmeg grater. "This iron may also have a small ring above in the middle, by which it may be put on and taken off. Which being done, arrange large and long coals, making them very hot, among which you make a space, and level them with a wooden mallet into which the iron is raised by the handle with the pincers, so that when covered you will place it carefully, and arrange the coals round and above it everywhere and taking the bellows with both hands, you blow on every side till the coals glow equally. You have also a wing of a goose or other large bird which is stretched and tied to wood, with which you fan well over it till you see between the coals that the holes in the iron quite glow inside;—then cease to fan.

"Waiting about half an hour, you uncover by degrees till you remove all the coals, and then wait till the holes of the iron grow dark inside; then, raising the iron by the handle, you put it with the cover behind the furnace in a corner till quite cold. Then you open it and take out the enamel and wash it, and again fill and melt it as before, and you do this until, melted equally everywhere, it has become full."

It is impossible to describe a simpler or better mode of procedure. At each firing, of course, the enamel would sink down, and need another layer.

"This being done, take a piece of wax the length of half a thumb, in which you fix the enamel

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so that the wax may be all round it. By this wax you will hold it [and you rub the enamel on a smooth, sandy stone with water, till the gold appears equally everywhere]." This last addition describes a quick way of getting the enamel rubbed down till the cloisons are visible, and the work is roughly flat. "Then you rub it for a long time on a hard and smooth stone until it acquires a polish: and you also rub on the same stone wetted with saliva a bit of pottery got from an old vase, till the saliva has become thick and red. This you smear on a flat leaden slab upon which you lightly rub the enamel until the colours appear transparent and clear. Again rub the pottery on the stone with saliva and smear it on a goat-skin smoothly stretched on a wooden table. Upon this you polish the enamel till it shines perfectly, so that if one half were wet and the other were dry, you could not tell which is the wet and which the dry part."

We should now use carborundum or emery for grinding, and rotten stone or tripoli powder to polish the enamel. If, however, a good piece of an old fictile vase were used, containing fine silica and oxide of iron, the powder would easily give a polish.

From this interesting description we can perfectly see how such jewels as Alfred's were made, and how simple were the means required to do it. It is tempting to quote other parts of this excellent treatise. I will, however, only give another extract. It is headed "Spanish Gold," which, says the author, "is composed of red copper, powder of basilisk, human blood, and acid. The gentiles, whose skilfulness in this art is known, thus make

basilisks. They have underground a house walled everywhere with stones, above and below, with two very small windows, so narrow that scarce any light can penetrate. In this they place two old cocks of from twelve to fifteen years, and give them plenty of food. When these have become fat, they lay eggs. When these are laid, the cocks are taken out, and toads put in to hatch the eggs, and bread is given them for food. The eggs being hatched, chickens issue out like hen's chickens, to which, after seven days, grow the tails of serpents, and immediately if there was not a stone pavement, they would enter the earth. Guarding against which their masters have round brass vessels of large size perforated all over, the mouths of which are narrow, in which they place these chickens, and close the mouths with copper coverings and inter them underground, and they are nourished with fine earth entering through the holes for six months. After this, they uncover them and apply a full fire until the animals are completely burned. When they have become cold they are taken out and carefully ground, adding to them a third part of the blood of a red man which has been dried and ground. These two compositions are tempered with sharp acid in a clean vessel. They then take very thin sheets of the purest red copper, and anoint this composition over them on both sides, and put them in the fire. And when they have become glowing, they take them out and quench and wash them in the same confection, and they do this for a long time, till the composition eats through the copper and it takes the colour of gold. This gold is proper for all work."

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The reader unversed in the language of alchemy may well wonder how a practical writer like Theophilus could quote this extraordinary jargon. This is, however, a recipe couched purposely in mystical language. The manufacture of sulphuric and nitric acids appear to be here dealt with. The two old cocks were probably the sulphates of iron and copper. The chamber appears to point to the manufacture of sulphuric acid. The result may have either been Dutch gold, or else something in the nature of the golden-coloured copper pyrites which is a compound of sulphur, iron, and copper.

One may conclude with an exhortation by the pious author. "Through the spirit of intelligence you have acquired the faculty of ingenuity to apply to your varied work, . . . by working and teaching openly, with humility, you faithfully expound to those desirous to learn. Through the spirit of perseverance you shake off sloth . . . and bestow with the confidence of a well-stored mind for the common good. Through piety you regulate the nature and destination of the work and the price of the fee, that avarice may not creep in. . . . By believing, confiding, and giving thanks, you ascribe to compassion whatever you have learned, or what you are, or what you are able to be." Words worthy to be written on the walls of every technical school.

Compare the spirit of this anonymous writer with that of the painter Wiertz, who wrote in charcoal on one of the folding-doors of his studio at Brussels the words—"Orgueil ; vertu qui inspire les grands œuvres, et qui blesse l'amour propre de l'autrui" ; —and on the other, "Modestie ; vice qui flatte l'amour propre de l'autrui, pour en tirer l'avantage."

It is impossible to conceive two more different points of view of art. The obliteration of self was one of the characteristics of mediæval artists, the assertion of self was one of the marks of the artists of the Renaissance.

It may be questioned whether any cloisonné enamel can be found in France, of a character similar to the Carlovingian enamels. There seems little. In the treasure of the very interesting monastery at Conques there is a portable altar of Oriental alabaster surrounded by a rim of filigree ornamented with Cabuchon jewels and little cloisonné enamels. There are also ten cloisonné enamels in copper. It is somewhat difficult to say whether this was French work or Byzantine. They were almost certainly done for the monastery or at the monastery, for St. Foy, the patron saint of Conques, is represented. After all, there is nothing extraordinary in considering them to be French. A single workman-monk, coming to the monastery, with the help of a boy or two to assist him, could have easily done them. The work is interesting, because it has been executed by means of cloisons in a hollow, made, not by carving in a solid plate, but by the corresponding Byzantine plan of cutting out the pattern in one plate and superposing it upon another.

The art of the Carlovingian period never really died; it merged gradually into the German, French, and Italian schools of the Middle Ages. In the eleventh century it underwent a revival which is sometimes called the eleventh-century Renaissance.

The style still remained Romanesque, that is to say, Italianized Carlovingian, for the Gothic move-

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ment was not introduced into Germany till about 1250 A.D. Hence, therefore, it was Byzantine in origin, but with a strong infusion of North Italian feeling. It was probably largely influenced by the Byzantine-Italian style of Ravenna.

In this Romanesque period a number of cathedrals were built, as, for instance, those of Strasburg, Trèves, Spire, Mainz, and Worms. To ornament these buildings a special style of painting, known as the Early Cologne school, was developed; and the art of jewellery made corresponding progress.

As the German school of enamelling evolved, the work became broader, cloisonné was replaced by Champlevé, and the Byzantine influence declined. The art became less and less a branch of jewellery, and more and more a kind of art-brass and silver-work. Copper and bronze almost entirely took the place of gold.

This naturally led to changes in the mode of treating the material. For censers and candlesticks stronger metal was wanted to stand the hard daily wear. This led naturally to Champlevé work cut out of heavy hammered or cast vessels. But this change, inasmuch as copper or bronze do not show very well under transparent enamels, led in its turn to the employment of opaque enamels, which, though not nearly so delicate in colour as transparent work upon gold, produced a greater effect at a distance.

Towards the end of the twelfth century Romanesque architecture was in a declining condition. The use of enamel upon shrines and reliquaries became more and more sparing, and figures, instead of being represented on the flat in coloured enamel,

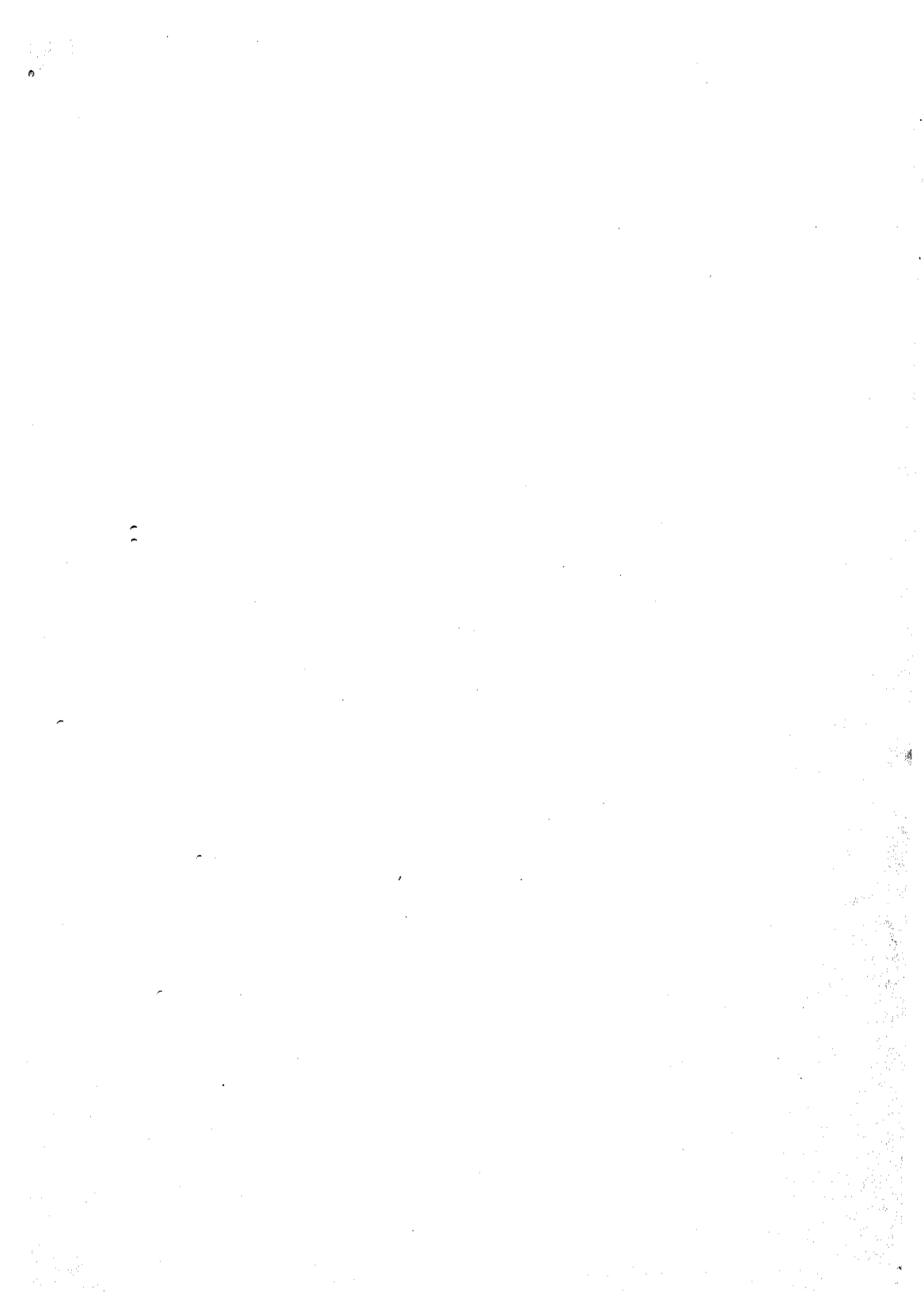
were executed in carved metal-work in relief. The reason of this change seems to have been a desire for bolder and broader work. Unquestionably at first the tendency was to imitate in gilt copper, on a larger scale, the delicate work of Byzantium. Champlevé is only a cheaper way of executing cloison work. For it was easier to cut discs out of the solid copper of a shrine, and fill them with cloisonné patterns, than to execute them as separate pieces and fix them on.

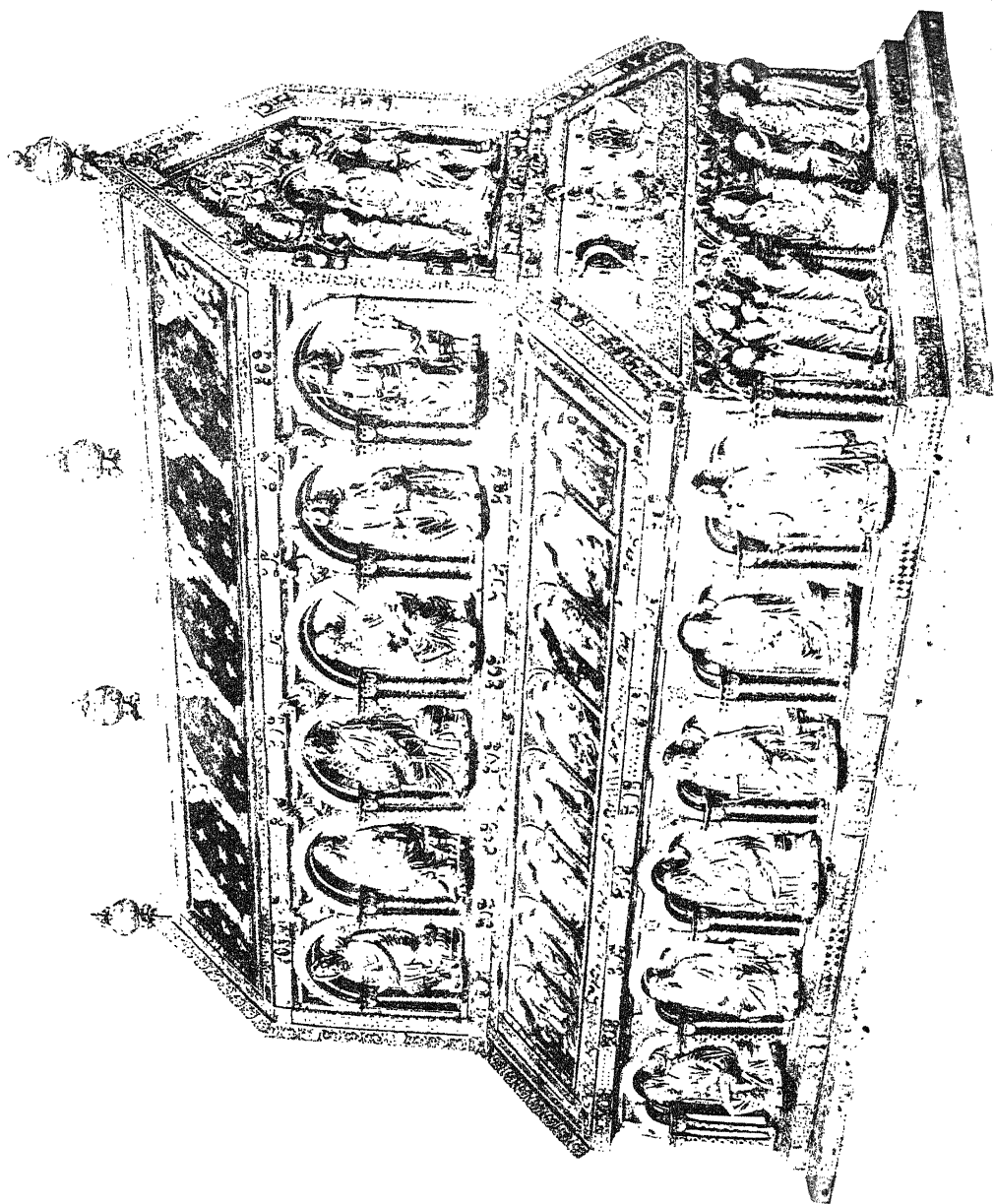
And as in this age the use of painted glass was introduced, churches grew darker in the interior, and therefore, as far as effect was concerned, Champlevé work was felt to be more suitable.

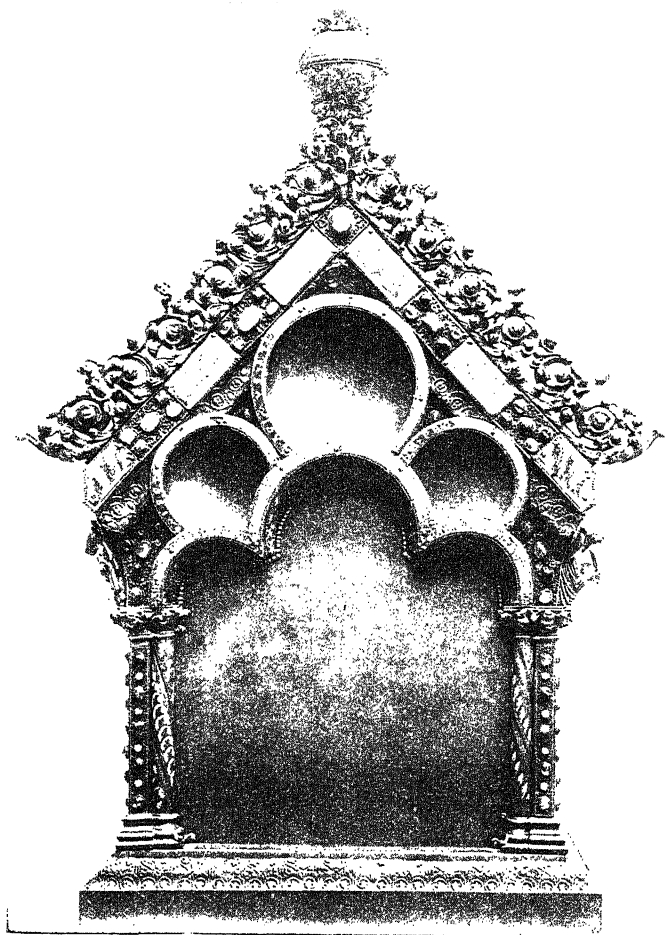
As the twelfth century progressed, a totally new architectural movement took place in Germany, owing to the introduction from France of Gothic architecture. For a time, of course, it was tinged with Romanesque influences, but by the year A.D. 1250 the Romanesque style was dead, and with it died the German mediæval school of enamelling.

It is, of course, impossible to give a description or even a list of all the German enamels which remain of the eleventh, twelfth, and thirteenth centuries. All that can be done is to select a few typical specimens for detailed description.

The first piece of German enamelling that deserves notice is the shrine of the Magi, in the cathedral treasury at Cologne. This large work is six feet long and $4\frac{3}{4}$ feet high, and was executed in the thirteenth century. It contains the bodies of the Magi, of which only the heads can be seen in the lower part, and in the upper the relics of SS. Felix,







SHRINE OF ST. ARNO, SIEGBURG

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Næbor, and Gregory of Spoleto. The relics of the Magi were buried in Constantinople by St. Helena. Thence, in A.D. 324, they were brought to Milan. In 1162 Frederick Barbarossa took Milan by storm, and these precious relics, being part of his plunder, he presented to the Archbishop of Cologne. They were received in a scene of public rejoicing, and a shrine was prepared to contain them. This magnificent work has fortunately escaped plunder. It is pure Romanesque in design and resembles a Roman basilica. At one end is a figure of the Virgin and Child with the three wise men of the East modelled in repoussé work. To these have been added the figure of the Emperor Otto IV. On the other side is the baptism of Christ.

Above these is a figure of our Lord with the Book of Life. At the other end is the Crucifixion of Christ with the prophet Jeremiah, the foreteller of the Passion. Over them is the Archbishop of Cologne. The sides are occupied by the twelve prophets, separated by pairs of richly enamelled pillars with characteristic Romanesque capitals. All are in repoussé silver, heavily gilt. Above them are the twelve apostles. It is to be remembered that the Apostles' Creed was by a tradition supposed to have been delivered by the apostles, each giving one sentence. The twelve major prophets were considered typical each of an apostle, and a series of sentences were collected from the prophets typifying the Apostles' Creed.

These sentences, with the corresponding figures, are so often repeated on shrines and windows that it may be useful to give them here.

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ST. PETER: I believe in God the Father Almighty, Maker of heaven and earth. [Symbol, the keys.]

ST. ANDREW: And in Jesus Christ His only Son our Lord. [Symbol, the transverse cross.]

ST. JAMES: Who was conceived by the Holy Ghost, born of the Virgin Mary. [The pilgrim's hat.]

ST. JOHN: He suffered under Pontius Pilate, was crucified, dead, and buried. [The chalice.]

ST. THOMAS: He descended into hell; the third day He rose again from the dead. [A builder's square.]

ST. JAMES (the less): He ascended into heaven, and sitteth on the right hand of God the Father Almighty. [A club.]

ST. PHILIP: From thence He shall come again to judge the quick and the dead. [The cross.]

ST. BARTHOLOMEW: I believe in the Holy Ghost. [A knife.]

ST. MATTHEW: The holy Catholic Church. [A scroll.]

ST. SIMON: The forgiveness of sins. [A saw.]

ST. JUDE: The resurrection of the body. [A ship.]

ST. MATTHIAS: And the life everlasting. Amen. [An axe.]

JEREMIAH: Thou shalt call Me, My Father; Who has made the heaven and the earth (Jer. III. 19; XXXII. 17).

DAVID: The Lord hath said unto me, Thou art My son; this day have I begotten thee (Ps. II. 7).

ISAIAH: Behold, a virgin shall conceive, and bear a son (Isa. VII. 14).

ZECHARIAH: They shall look on Him Whom they have pierced (Zech. XII. 10).

HOSEA: O death, I will be thy plague; O grave, I will be thy destruction (Hos. XIII. 14).

AMOS: He that buildeth his ascensions in the heaven (Amos IX. 6).

ZEPHANIAH: I will come near you to judgment, and I will be a swift witness (Mal. III. 5).

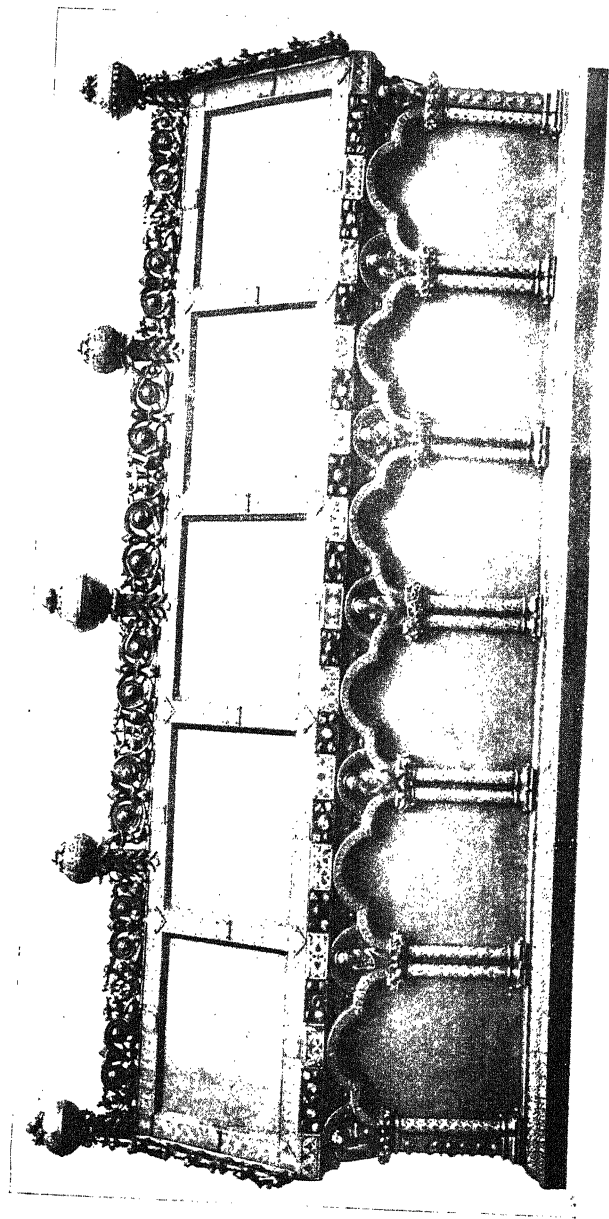
JOEL: I will pour My spirit upon all flesh (Joel II. 28).

MICAH: All call upon the name of the Lord to serve Him with one consent (ZEPH. III. 9).

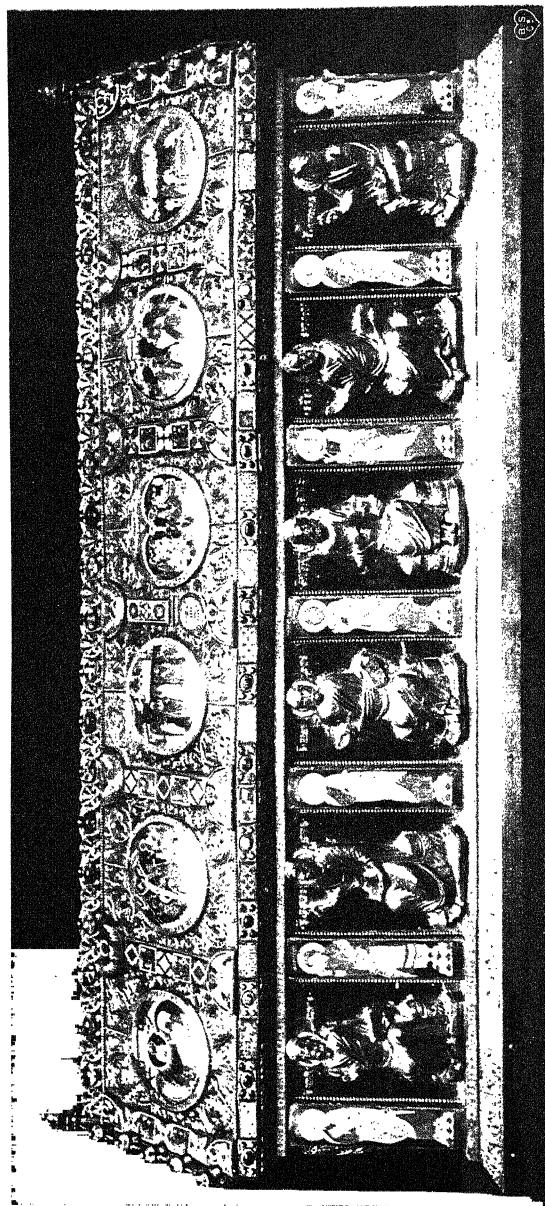
MALACHI: If thou feelest angry put it away from thee (Malachi II. 16).

DANIEL: O my people, I will cause you to come up out of your graves (Ezek. XXXVII. 12).

OBADIAH: The kingdom shall be the Lord's (Obad. 21).



SHRINE OF ST. ARNO, SIEGBURG



SHRINE OF ST. HERIBERT, DEUTZ, COLOGNE

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It is a not uncommon arrangement for these apostles and prophets to be put in corresponding windows in churches. At Chartres this is carried so far that the apostles are actually represented seated on the shoulders of the prophets, the appropriate quotations being made to proceed out of the mouths of each.

After the outbreak of the French Revolution the shrine at Cologne was taken to pieces and removed to Frankfort, being much damaged in the process. On putting it together again, parts of it were painted over, and it was shortened by a whole panel. In 1820 a robber stole parts of it, which were afterwards found in a field.

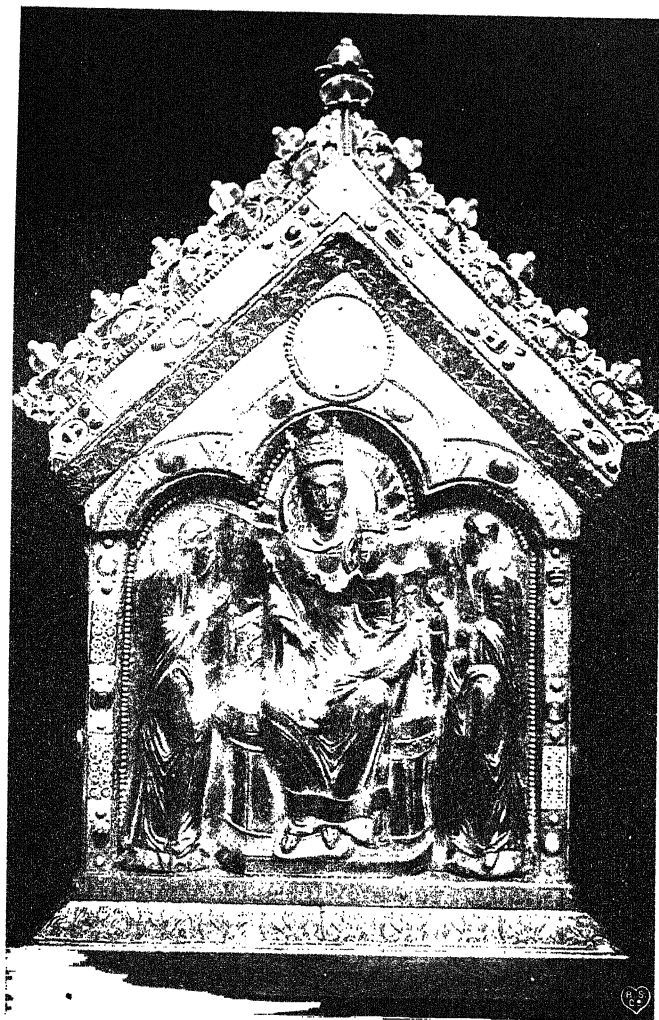
The shrine bears the mark of frequent restorations, but the major part of it is undoubtedly fine thirteenth-century work. There are many large jewels in it, almost all being rough cabochons. There are also some fine antique cameos representing statues of Victory and other subjects.

There is a very interesting reliquary at Siegburg, near Cologne, where once a Benedictine monastery existed, presided over by St. Anno, Archbishop of Cologne. It dates from 1182. It is about twenty-eight inches high and nearly five feet long. The side is divided into six compartments, in each of which a figure was once placed. Double columns, beautifully enamelled, divide the spaces; over each pair of columns there are small but charming capitals with lambs, surmounted by most beautiful half-figures of gilt metal, standing out of semicircular enamelled niches. It is studded with jewels, but of no great value. The roof ridge, and ridges down the gable ends are remarkable, consisting of beauti-

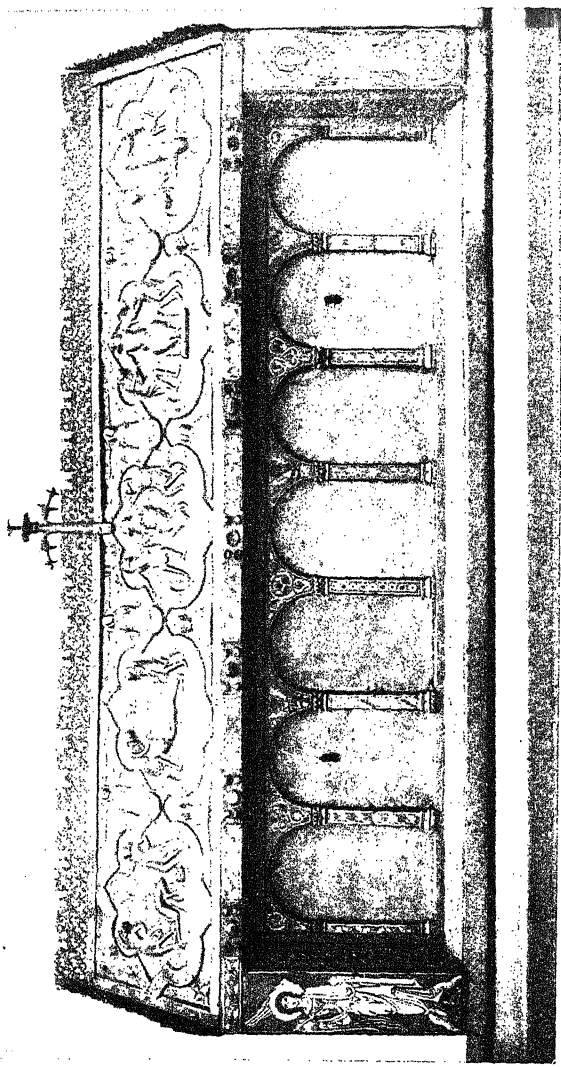
ful deeply moulded foliage, with sitting figures interspersed. The whole of the work is in copper gilt. The Champlevé work has been produced, as usual, by cutting out recesses in copper, with vertical sides and flat at the bottom. Cloisons of bent copper are then placed in these, so as to give an outline to the enamels. These cloisons are never fastened down with solder, but are held by the enamel placed in their interstices. I learned their peculiarity from the accomplished Mr. Beumers, a jeweller of Düsseldorf, who repaired the whole shrine a few years ago. Mr. Beumers can imitate thirteenth-century German work so perfectly that when pieces are put side by side with originals, even expert antiquaries cannot tell the difference. He showed me a number of originals, side by side with copies. They were indistinguishable. He has added a considerable number of missing parts to several shrines, with such skill that the experts cannot tell which is new and which is old; and as the new parts are not distinguished by any marks or name, when Mr. Beumers dies it will be impossible to know the old from the new. This will considerably diminish the value of the shrines as objects of study.

To see some of the imitations of Limoges caskets which the above artist has executed, old wood, rusty locks, and all, ought to convince any one how rash it is to buy a piece of enamel merely on inspection. I ought to add that Mr. Beumers does not confine his attentions to imitations, but has produced many important original works, and is one of the best-known makers of ecclesiastical plate in Germany.

Perhaps of all the shrines in Germany, that of



SHRINE OF ST. HERIBERT, DEUTZ. COLOGNE



SHRINE OF ST. MAURINUS AT ST. MARIA

IN THE SCHNURGASSE, COLOGNE

MEDIÆVAL ENAMELS

St. Heribert, at Deutz, opposite Cologne, best merits attention, from its beauty and very perfect condition. No description can really give an idea of this splendid work. Along the sides are relief figures in gilt silver of the apostles, Judas being included, and also having his aureole. Between them are enamel representations of the twelve greater prophets, with Moses and David added. Each apostle holds a book with his sentence of the Creed written on it, and each prophet holds a scroll with his typical utterance. On the top are scenes from the life of St. Heribert. The colours are two shades of blue melting into white, and green melting into yellow. In the spaces between the circular plates of enamel on the lid are repoussé patterns of grotesque animals. Stamps appear in places to have been used to produce them. There have been restorations done in various parts, but the main portions of the work are intact. Very little cloisonné, if any, has been used in the Champlevé work, the effects being got by juxtaposing the enamels without cloisons.

The shrine of St. Maurinus at St. Maria, in the Schnurgasse, Cologne, is worth attention. There are seven niches on each side, from which the figures are gone. At each of the corners on a flat pillow are enamelled cherubim with six coloured wings. The faces are also in enamel, and very Byzantine in feeling.

The roof consists of repoussé copper strongly gilt. The letters are left in natural copper colour, browned by the fire, upon a gilt ground. This gives a very harmonious and beautiful appearance. It is a sort of gold damascening on copper. This plan was often used in Germany in the thirteenth century.

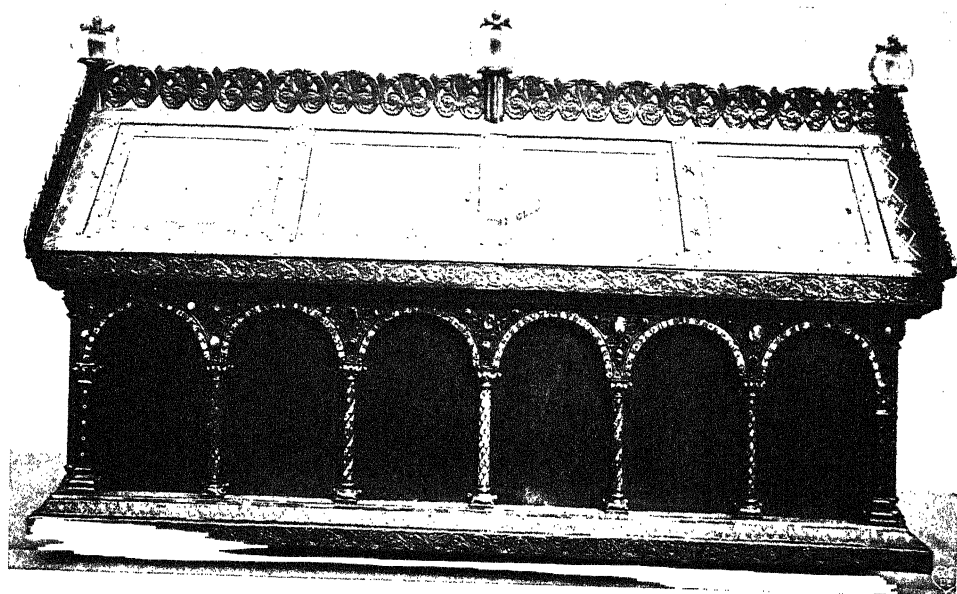
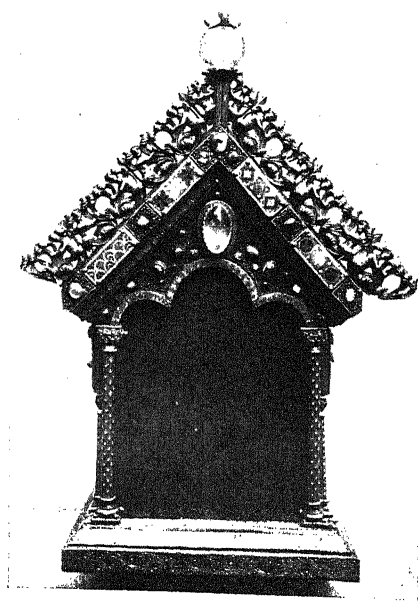
The ridge of the roof is of grotesque dragons, which bear the marks of having proceeded from the same mould, or rather the same pattern used over and over again to make moulds. Nothing in this work is more striking than the evident skill of these workmen in the art of casting in metal. The castings are clear and flawless. Almost everywhere they have been worked up with tools. A good many cloisons have been used here in the recesses of the Champlevé. The enamelled plaques are, as usual, nailed on, the nails showing everywhere. The metal is all copper. The colours are opaque white, yellow, turquoise, blue, green, and opaque red. The whole work has the air of a skilful imitation in cheaper materials of a more expensive shrine. The jewels are poor, being mostly amethysts and cornelians, and in some cases bits of glass. There is also gilt filigree work.

The shrine of St. Benignus at Siegburg is nearly three feet long, and has beautiful enamelled pillars. The gilt work of the gables is very fine.

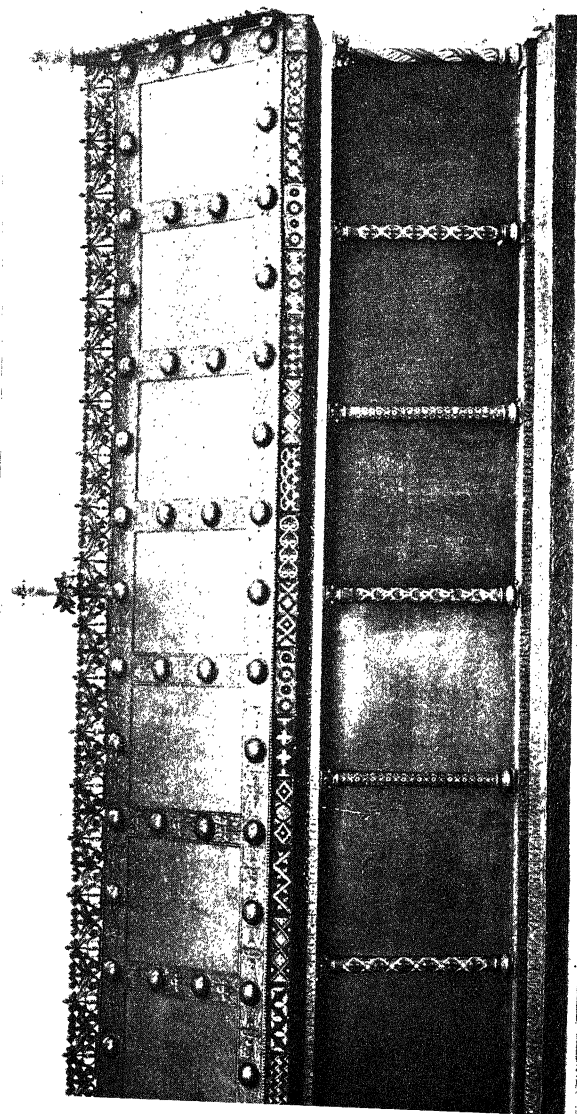
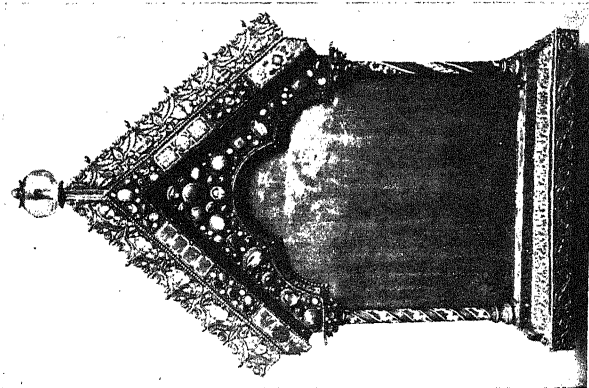
The shrine of St. Mauritius and Innocentius, also at Siegburg, has most exquisite pillars. The way in which the enamel begins with blue, melting through turquoise into white, is very effective. The panels are all unfortunately empty, the silver figures having been plundered.

A very fine shrine of St. Honoratus, also at Siegburg, has been more fortunate, for nearly all the figures are intact.

The parish church of St. Ursula at Cologne contains the shrine of St. Ursula. The colours of the enamels are very fine, and they are put in juxtaposition in the Champlevés without the use of



SHRINE OF ST. BENIGNUS AT SIEGBURG



SHRINE OF ST. MAURITIUS AND INNOCENTIIUS AT SIEGBURG

MEDIÆVAL ENAMELS

cloisons. Unfortunately all the figures have disappeared, but the enamelled portions that remain are a very beautiful example of German work towards the end of the twelfth century. There is also here a free use of letters and patterns in oxidized copper, showing brown upon a ground formed by gilding the metal. The green is very skilfully shaded into light green and passes into yellow.

In looking at these representations of foliage in blue and green with shaded stems and leaves, it is obvious that they have been adapted from the work of the missal painters. In figures and ornament the work is exactly like that of the miniaturists of the time, except that the enamel is rougher. It appears to be the opinion of experts that the enamel glass used by the German workmen all came from Venice. I think some probability is given to this opinion by the very great uniformity of tint and colour that prevails in pieces which are now at very different places, and that are different in their style of work. It is rather surprising that the whole of the enamel work, both in Germany and France, of the ninth and tenth centuries should exhibit such uniformity of tone. The work of the monk Theophilus already alluded to does not describe the mode of making enamel, though the process of putting the enamel on the copper is very fully given. This also lends colour to the theory that the Germans did not know how to make those kinds of soft coloured glass that are used for enamelling.

In the Collegiate Church of Kaiserswerth is the shrine of St. Suitbertus. This work was finished in 1264. It has been much restored, and has been

EUROPEAN ENAMELS

cleaned so as to shine like the sun. The restoration has in part been done in bad taste, but the shrine is a fine piece of work, very illustrative of the period. The enamel is of the usual type and fashion.

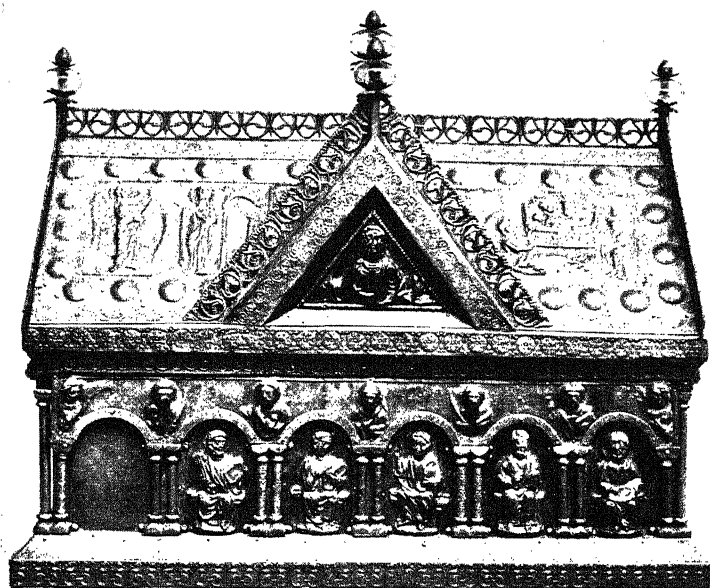
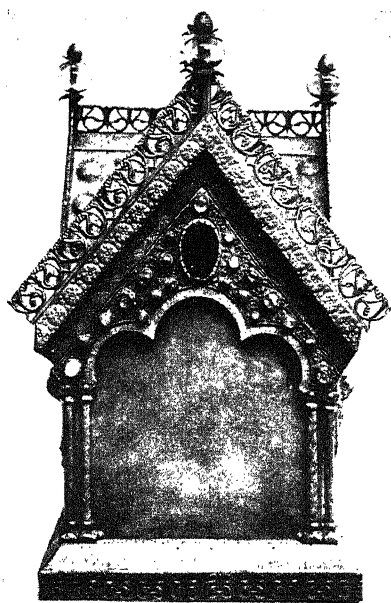
A very pretty piece is also to be found in the church of St. Maria at Cologne. It is a cross, but the figure is gone. The shadings of the blue and green are very effective. (*Circa* A.D. 1170.)

At Aix-la-Chapelle in the Münster Church is a shrine containing the relics of St. Simeon. It is a representation of the presentation of Christ in the temple. On a table stands a small vessel, perhaps intended to contain the Host, and on each side are figures, St. Simeon and the Virgin. The general effect is striking, but the figures are very poor. The enamels are translucent, smeared upon badly engraved silver plates by one who had little knowledge of the art; the colours are the usual ones employed for this work—green, purple, grey, blue, turquoise, and yellow.

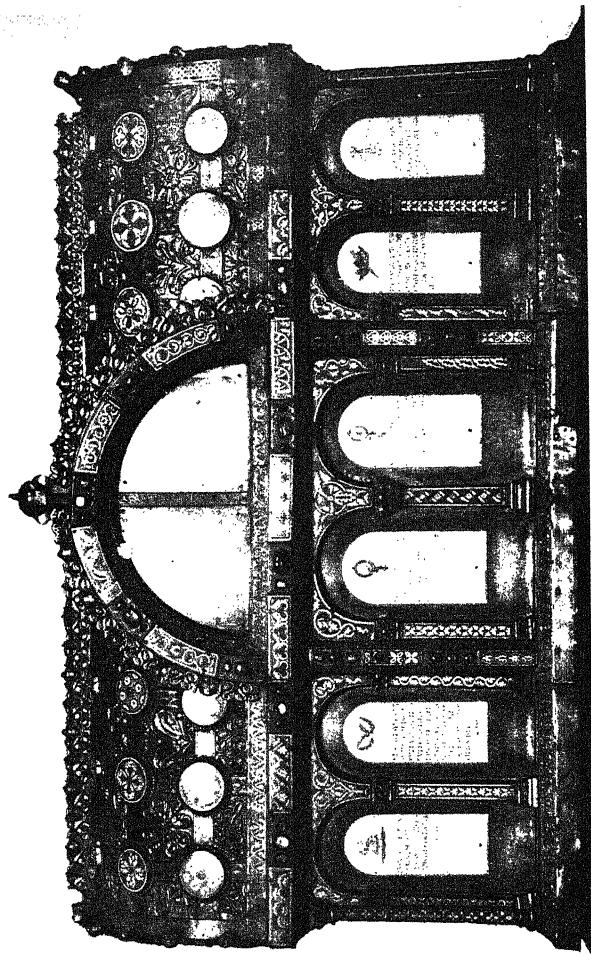
The reliquary in the form of a bust of St. Cornelius, in the Abteikirche Cornelimünster, which dates from the end of the fourteenth century, is also ornamented with translucent enamel. A good red is employed.

Translucent enamels are likewise found in a monstrance at Ahrweiler, also in a ciborium in the cloister-church at Hochelten, also at the church of St. Ursula at Cologne.

At Aix-la-Chapelle there is a very powerfully designed piece looking like new. Whether it has been repaired or no I am unable to say. It is a pectoral tablet of Christ sitting on a rainbow, sur-



SHRINE OF ST. HONORATUS AT SIEGBURG



SHRINE OF ST. URSULA AT COLOGNE

MEDIÆVAL ENAMELS

rounded by the seven spirits of God. The opaque red is especially brilliant.

In the same treasure is also a cover for a Codex of the Gospels (late Carlovingian). It is cloisonné, but executed with opaque enamels.

At Xanten in the Stiftskirche is a portable altar. These altars were used for private celebration of Mass, and consisted of the block of stone, which is necessary to the sacrificial character of the ceremony, surrounded by gold or gilt-copper ornament. In this instance enamel is largely used, and the work is of the twelfth century, but restored in the eighteenth. The colours are dark blue, green, white, and a light blue, made by mixing together pounded white and dark blue, and melting them into place together. It is a very interesting piece of work.

At München-Gladbach there is a similar portable altar. The stone is green marble. The enamels are green, shading into blue and into white, light blue, white, and yellow. All are opaque. The features of the figures are all in engraved gilt copper, and are not rendered by means of enamel. There is also a portable altar at the church of St. Maria im Capitol at Cologne. It is poor work, and very like that last mentioned. In fact, they seem to have come from the same workshop. And a similar one also is to be found at Siegburg. The ground of part of this altar is executed in copper, partly gilt and partly oxidized, constituting a brown pattern on a gold ground.

In the same church is a reliquary of St. Andrew with a fine shade of turquoise blue. Here, again, a light blue has been made by pounding together white and dark blue. The effect is slightly mottled.

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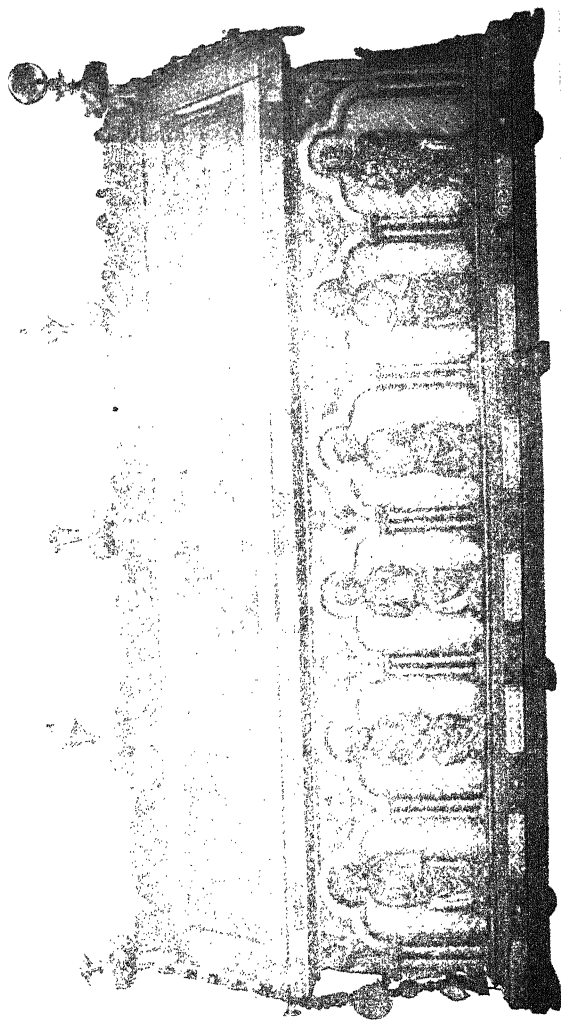
Here also are two characteristic roof-shaped reliquaries most characteristic of Limoges. The colouring is harmonious, and in the copper ridge on top of the roof are, side by side, a number of keyhole-shaped orifices so often found in Limoges pieces. The heads of the figures are in relief in carved metal. It is also to be noticed that in one of them a black opaque enamel is used, which colour I do not remember to have seen in German work of the twelfth century. An intensely dark blue is also employed. The result of these colours is to give values to the others. A very similar reliquary is in the Stiftskirche at Gerresheim.

At St. Gereon's Church, at Cologne, are two famous reliquaries in the shape of arms adorned with small plaques of early thirteenth-century enamel.

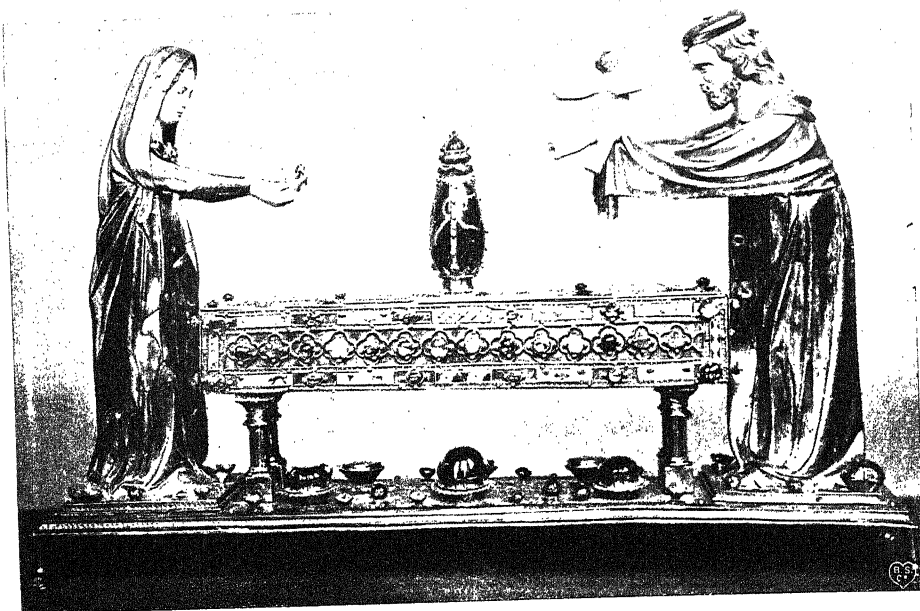
At Trèves there is an interesting triptych of the twelfth century in Champelevé, with scenes from the life of St. Andrew; as also a cover of a book of the Gospels of about the same period, adorned with plaques of Champelevé pinned down to it, and interspersed between rough jewels set in gilt silver. (A much better one of the same character is in the museum at Berlin.)

In the Royal Hohenzollern Museum at Sigmaringen, there is a good collection of interesting mediæval works. In one, a reliquary, the mode of work is very clearly shown, for the enamel has not been entirely polished down, consequently in parts the original melted surface can be seen. The work is, however, a poor one.

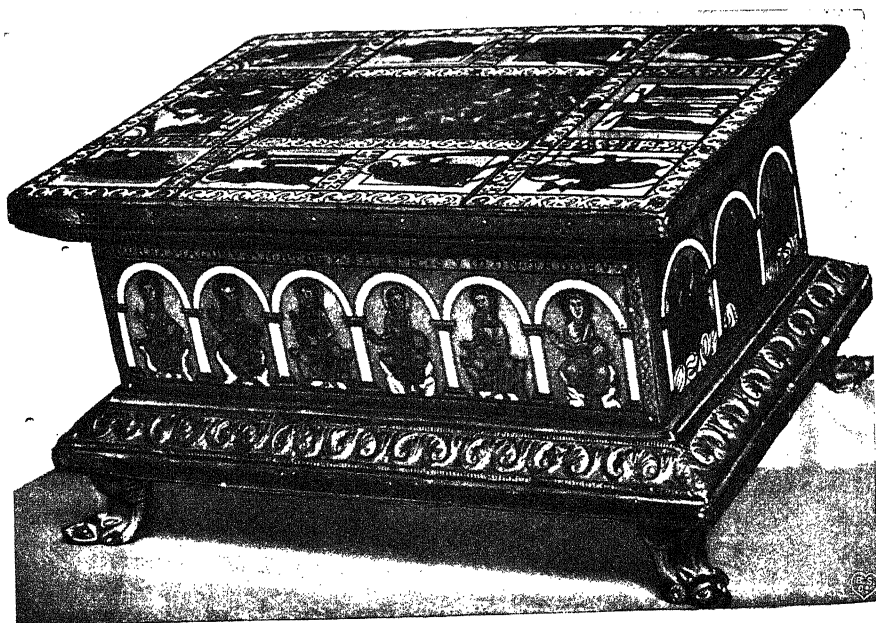
In addition to those I have mentioned, I may also cite several crosses in the treasury at Essen, and



SHRINE OF ST. SUTBERT'S, KAISERSWERTH



RELIQUARY OF ST. SIMEON, MÜNSTER, AIX-LA-CHAPELLE



PORTABLE ALTAR, MÜNCHEN-GLADBACH

MEDIÆVAL ENAMELS

the crown of Charlemagne, which was made on the borders of the Rhine and preserved for centuries at Aix-la-Chapelle. This crown, in spite of its pretended antiquity, probably does not date earlier than the eleventh century. It served repeatedly to crown the emperors of Germany, and remained at Aix till the outbreak of the French Revolution, when it was taken for safety to Vienna, where it now is. There is also at Aix an interesting chair of the eleventh century, given by Henry II.

At the South Kensington Museum, London, is a reliquary with a curious canopy of the twelfth century. The form of the reliquary, a short-armed Greek cross, is evidently derived from Byzantine sources.

The dove is one of the most ancient eucharistic vessels, and was usually suspended over the altar by chains. Doves were usually made of metal and frequently enamelled. A small box was sometimes put between the wings to receive the host. Sometimes a door was made in the beak and the sacred elements put in the body. Usually the wings were made separately and riveted on to the body. In some cases they were hung in a sort of lantern and had a little curtain drawn round them. In the interesting work of Ernest Rupin a detailed list of those known to be in existence is given. In all cases, these doves being usually about thirteenth-century work, the enamel was Champlevé and rather rough in workmanship.

The use of crucifixes dates from the time of Constantine. Very many were made in enamel during the thirteenth and fourteenth centuries. Although according to the tradition of the Church

EUROPEAN ENAMELS

our Lord was crucified naked, yet the earliest crucifixes, out of a feeling of reverence, represented Him as clothed in a tunic with sleeves, and this custom prevailed till the end of the twelfth century.

At that date, however, a movement in favour of realism set in, and Christ was represented with only a loin-cloth. Moreover, up to the eleventh century our Lord was generally represented living, and it is not until the fourteenth century that He is represented as dead. Perhaps the reason of this change was a desire on the part of artists to represent the wound in His side, which was given after His death, and which of course is absent in the earlier representations—perhaps a feeling that His representation became an object of greater worship after the divine sacrifice was consummated.

In early crucifixes the figure of Jesus wore a kingly crown. Later representations adopted the crown of thorns.

A very curious tradition represented Adam at the foot of the cross, for an early legend placed Calvary on the place where Adam was buried.

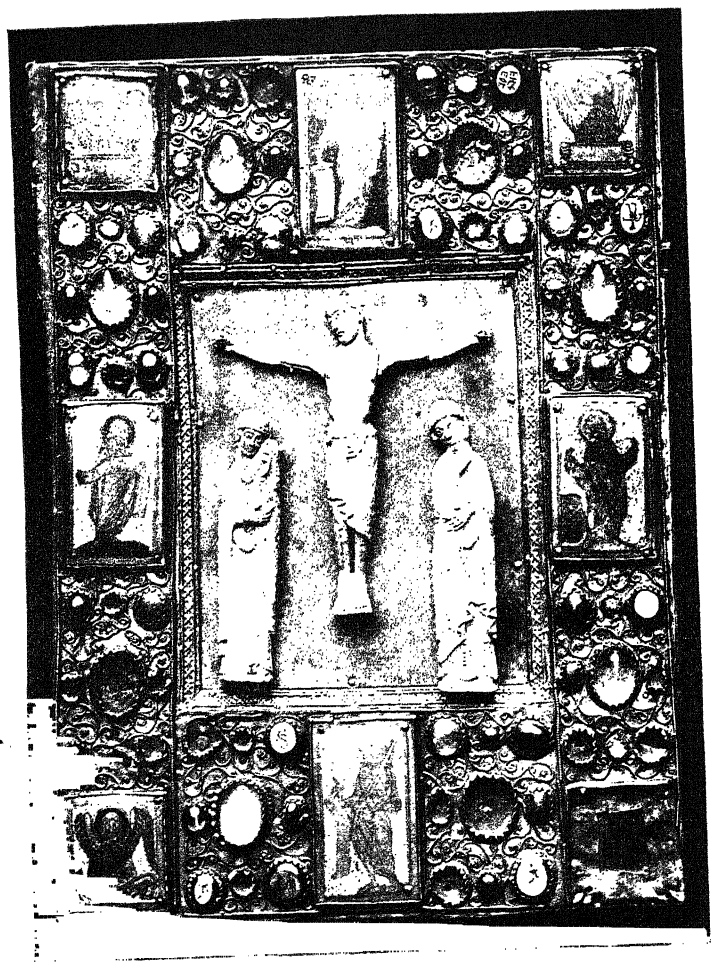
In pictures of the descent of our Lord into hell, He is almost invariably represented as carrying a banner with a cross upon it, and the first persons to be released are Adam and Eve.

Round the crucifix seraphim are sometimes represented, provided, according to tradition, with six wings. The evangelists also appear, sometimes as men, but frequently in their typical form.

This form is derived from the four beasts, of whom the first was a lion, the second a calf, the third with the face of a man, and the fourth a flying eagle. The fathers were united in considering



TRIPTYCH WITH SCENES FROM THE LIFE OF ST. ANDREW, TRÈVES



COVER OF A BOOK OF THE GOSPELS, TREVES

MEDIAEVAL ENAMELS

them as types of the evangelists. St. Mark was typified as a lion, St. Luke as the ox, St. Matthew with the face of a man, and St. John as the eagle.

Crucifixes fastened upon poles are very frequently enamelled, and were used in the processions which usually preceded mass.

Crosses were also very frequently used as reliquaries, in which case the small receptacles for the reliques were either placed at the extremities, or else replaced the body of Christ. The double cross is generally considered to be of Byzantine origin.

At the Bodleian Library at Oxford there is a crucifix with Christ completely dressed in a blue tunic and green robe bordered with red. There are others of considerable interest in the Louvre and at the Cluny Museum at Paris.

Contemporaneously with the rise of mediæval German enamelling, a school of mediæval enamellers was formed in France. The movement began in France about the same time as in Germany (the eleventh century). Like the German, it was developed out of the Carlovingian style, but it lasted longer, not becoming extinct till towards the end of the fourteenth century.

The characteristics of its advance were a change from cloisonné to Champlevé, the use of opaque enamel, and greater breadth of design and coarseness of execution. In general style it presents strong analogies to German work. This, in fact, is hardly to be wondered at, for French and German artists must often have seen one another's handiwork. In France, however, the art was worked more on a commercial scale and in a manufacturing

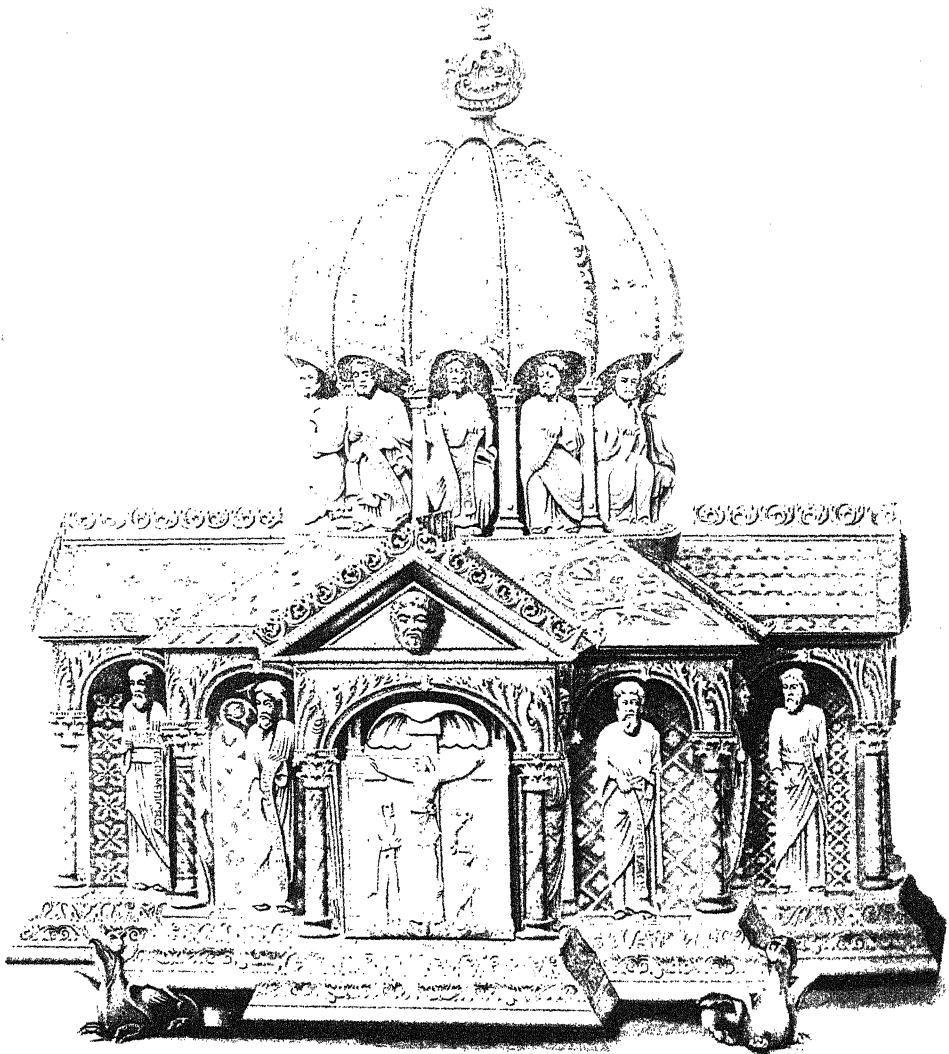
EUROPEAN ENAMELS

spirit. We therefore see patterns repeated, and castings on different pieces from the same mould. This led also to a repetition of commonplace subjects which could be used anywhere, instead of being only adapted to some particular church. For the same reason, special inscriptions are often found upon German work, whereas French enamels are usually free from them.

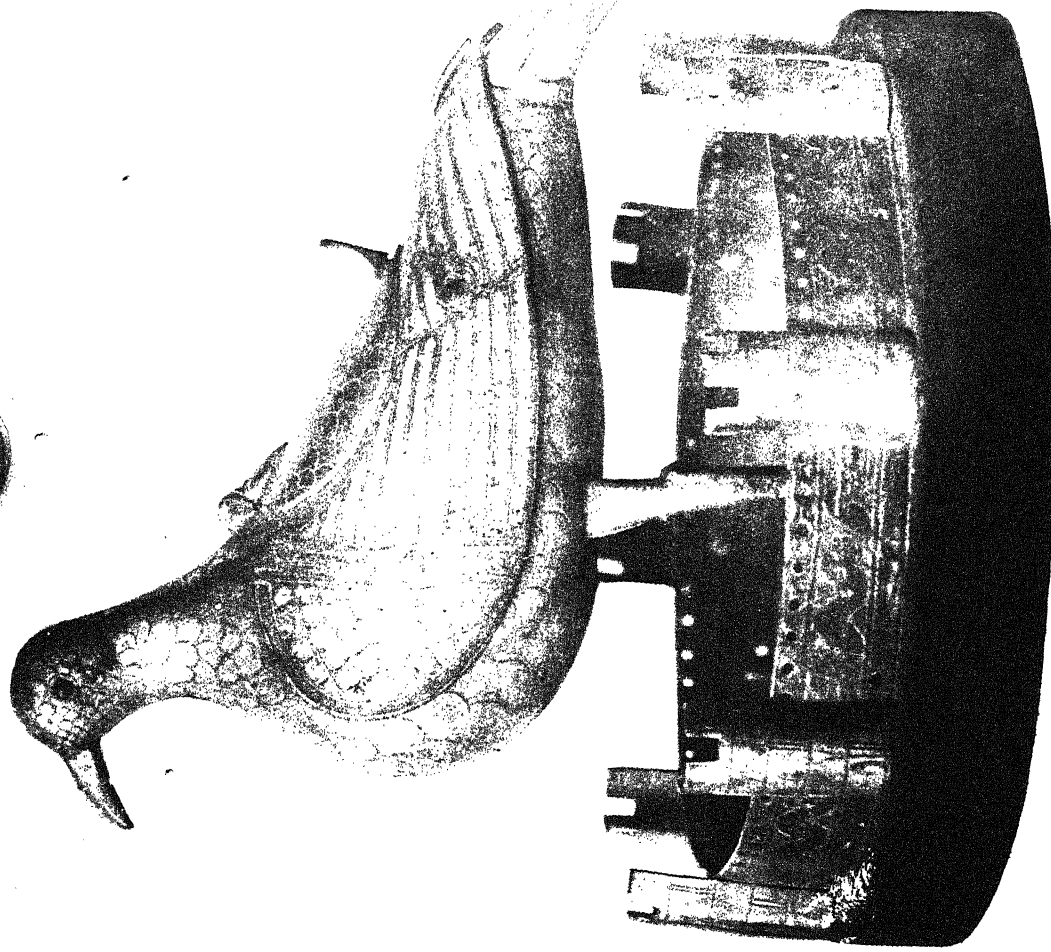
On the other hand, the French colouring was distinctly better than the German, who were apt to place crude yellows and greens in juxtaposition, like the colours of a West Indian parrot.

The eleventh century in France witnessed an extraordinary outburst of intellectual activity. Universities were founded, and men from all parts of the world flocked to them, and artistic progress went hand in hand with literary and intellectual development.

The new movement first made itself felt in architecture. In France there rose in all directions those cathedrals which are the aspiration of the devout, the delight of artists, and the despair of imitators. At Chartres, Rheims, Amiens, Sens, Paris, and numberless other towns, glorious fabrics were erected in the new Gothic style. Often consumed by fire, they were often rebuilt, being made to depend more and more on stone and less on wood. They were generally very dark, for hardly any of the congregation knew how to read or cared to learn. Hence, then, the art of the glass-painter came into vogue. The first aim of the church decorator of those days was to produce an effect of seeming value. The common people, seeing the windows gleam with the colours of the emerald and



CANOPY SHRINE
AT SOUTH KENSINGTON MUSEUM



PYX, IN FORM OF A DOVE, ON A CIRCULAR TRAY, SHAPED LIKE THE WALLS OF A TOWN
LINDOGRE, THIRTEENTH CENTURY

MEDIÆVAL ENAMELS

the ruby, believed that in some way precious stones had been used in the manufacture of the glass. The aim of the painter, as of the shrine-maker, was then by no means to make a picture, but to give the effect of a blaze of precious stones. And in the early reliquaries we find precious stones and glass enamels all mixed up together.

In the building of these cathedrals and towards the making of the windows and shrines, it is incredible what labour and sums of money were expended. Nobles and burghers harnessed themselves to the carts that drew the stones and contributed a substantial part of their incomes towards the expenses. Instead of decorating their own houses, they thought almost exclusively of the house of God. Would that it could be added that all this was pure unselfishness. The personal and selfish hope of escaping the penalty of their sins (and in those days they committed plenty of them) had a great deal to do with their liberality. This was coupled with the feeling that the presence of Christ and our Lady would be better secured in their midst by the erection of buildings worthy of them.

The Gothic style was, of course, chiefly a development of the Romanesque. The leading feature of the change seems to have been a desire for relief. Thus, instead of the pictures with which the earlier decorators were content, the Gothic builders preferred painted alto-reliefs; they surrounded their buildings with statues, not merely outlined, but completely detached from the walls.

Some writers have suggested that the art of enamelling at Limoges was originally derived

EUROPEAN ENAMELS

directly from Byzantium, even suggesting that the Doge Orseolo brought it from Venice. There is no need for any such theories. Enamelling in France in the Middle Ages was only a branch of an art which was practised in Germany and in Italy, and which had been imported into Europe from Byzantium, no doubt by way of Venice.

Plaques of Limoges enamel were often used to ornament boxes for containing jewellery or other articles of attire.

Of these there is a fine example in the Louvre. It bears marriage scenes on the lid and the arms of France and England, and the inscription :—

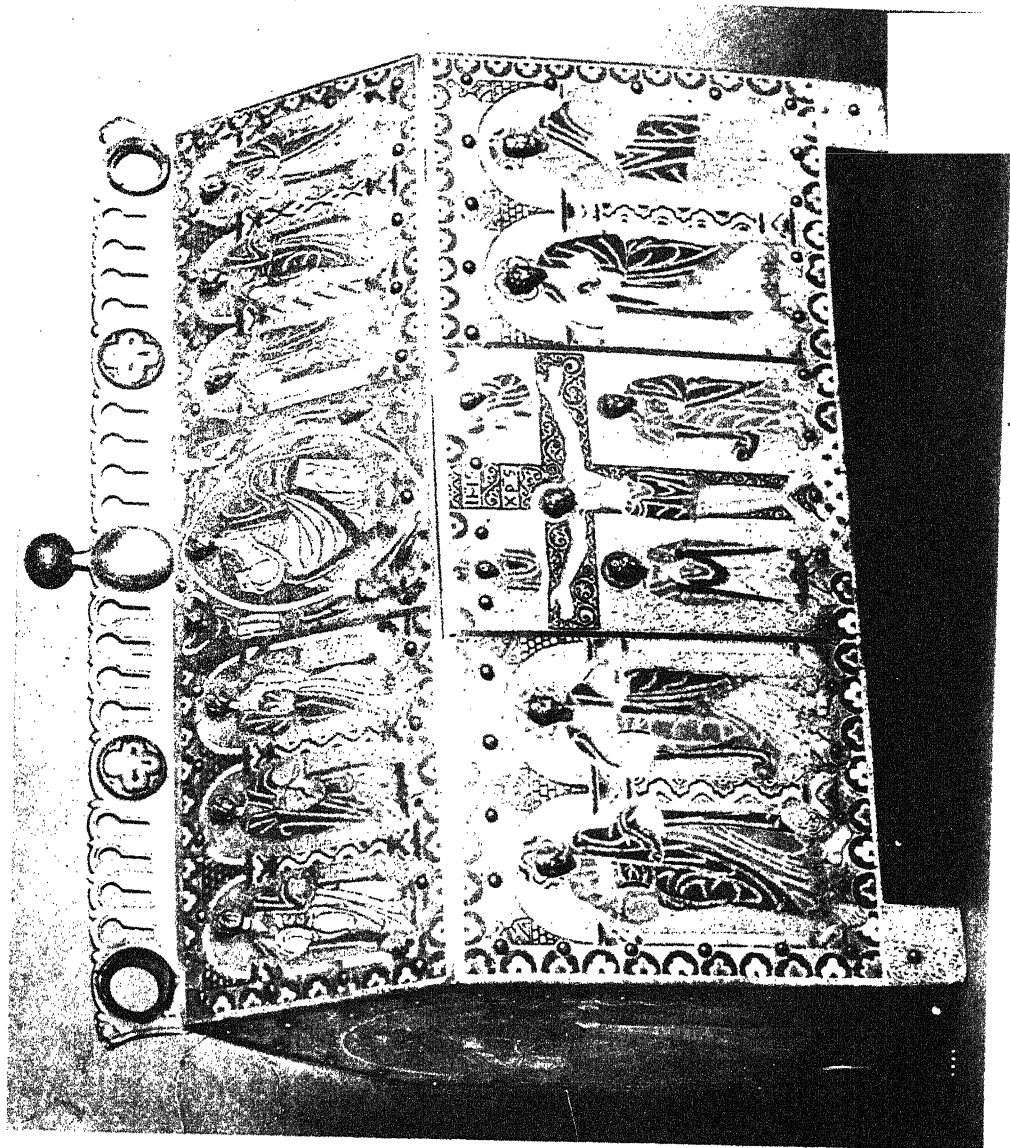
Dosse dame, je vos aym lealmant
Por die vos prie prie ne m'oblie mia.
Vet sit mon cors a vos comandement
Sans mauvesté et sans nultre folia.

There is a smaller one at the South Kensington Museum with the arms of Aymer de Valence, Earl of Pembroke, upon it. The enamels are surrounded by studded nails driven into the box.

There is also one in the possession of Lord Balfour of Burleigh, and another which is the property of Mr. Jerdone Braikenridge.

At Westminster the tomb of William de Valence, Earl of Pembroke, in Westminster Abbey, affords an example of Limoges work, but is much damaged.

Towards the close of the fourteenth century the taste for enamelling had gone. Like other arts in France, it was extinguished by the terrible wars with the English; nor did it revive again until France had become united into one kingdom in the time of Francis I.



MEDIÆVAL ENAMELS

The decay was marked by an advance of the merely manufacturing spirit. The later Champlevé enamels are so roughly done as to be hardly worthy to be more than kitchen utensils, although even in their decline some traces still remain of the noble design which was once the glory of the artistic work of France.

One of the most widely known and interesting pieces of Limoges enamelling is the brass that once ornamented the tomb of Geoffrey Plantagenet, Count of Anjou, and is now in the museum of Le Mans. It is about two feet high. It contains a rude archaic figure of the Count, very much out of drawing and with very little grace or feeling in it. The costume is not that of war, but he bears a shield and sword, with a pointed cap. The dress is in green and blue. On the upper part is a Latin inscription :—

With thy sword, O prince, the crowd of plunderers
is put to flight,
And rest, through long peace, is given to the
Churches.

This inscription, instead of alluding to some great national service, only relates to the abolition by the Count of the ancient custom, according to which, when a bishop died, the people divided his possessions. The tomb of Eulger, Bishop of Angers, was about the same date and of similar execution.

There is a celebrated cup with a cover in the Louvre. It was used as a communion cup. It is of copper hammered out, Champlevé and enamelled with thirty-six jewels, or rather imitation gems, in cabochon form. The enamels represent saints

EUROPEAN ENAMELS.

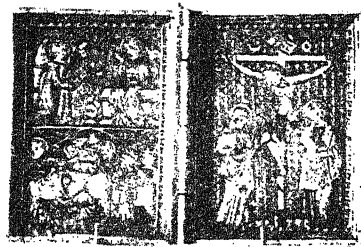
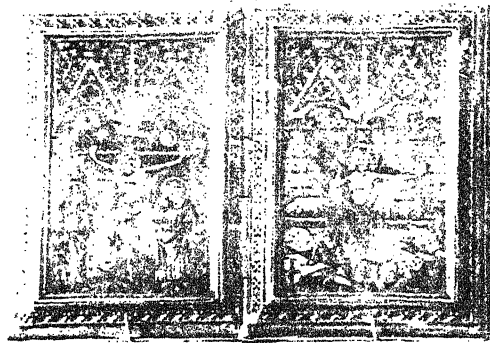
between rows of archangels. The foot and head are of chiselled copper. All the exposed metal work is gilt. Inside there is an inscription: "Master Alpais, of Limoges, made me." This workman is otherwise unknown.

The Limoges workmen made many of those dishes for washing after dinner, which were called "twins." They were of Champlevé copper, and usually bore the arms of the family for whom they were made. One of them was plain, the other had a short spout, usually provided with a strainer. The work is rough, the designs Gothic, with a trace of Byzantine feeling.

At Conques some fine examples are to be found of Champlevé enamels of the twelfth century. Especially noteworthy is a box covered with copper, studded over with silver nails; at intervals are fastened on by means of nails, discs of Champlevé enamels, opaque in colour, and of fantastic animals and birds. The colours are blue, green, and white.

To make the boxes more gorgeous, they were covered sometimes with plates of thin gold, sometimes with plates of tinfoil, coloured with a yellow varnish to imitate gold, and on this surface the enamelled discs were nailed.

A characteristic reliquary of Limoges work is also to be seen at Trèves. At Münster there is a fine crucifix with Champlevé enamels and rough stones of Limoges work about A.D. 1200, as also an ivory pyx, also set in Limoges enamels, about A.D. 1300 in date. These contain some fine armorial bearings with a very good opaque red enamel.



EXTERIOR OF DIPTYCH IN BASSETAILLE, ON SILVER GILT
FRENCH, FOURTEENTH CENTURY

INTERIOR OF SMALLER DIPTYCH, FRENCH OR ENGLISH BASSETAILLE
FOURTEENTH CENTURY

SHIELD, WITH VISCONTI ARMS, IN BASSETAILLE
ITALIAN, FIFTEENTH CENTURY

CHAPTER VI

ENAMELLED BAS-RELIEF. BASSETAILLE

FROM a very early period enamel had been employed to cover small figures. These were used largely for personal ornament. Unhappily the desire for change and for following the fashion has always been a ruling motive in the female mind, and for that matter in the male mind too, so that very few of these ornaments have survived. An account of this work belongs rather to a treatise on jewellery than enamel proper. A modification of this practice was to cover a small picture carved in low relief with a layer of enamel with a flat surface—to embed it, as it were, in glass.

Very beautiful effects are thus produced, as not only may each figure be given its appropriate colour, but the varying depths of the enamel afford a splendid gradation of tones. This work is, I think, by far the most beautiful from an artistic point of view that the Middle Ages have produced. To secure beauty of colour it was always done on gold or silver, and this, perhaps, is the reason why so little of this work has been preserved.

It is quite useless by description or wood-cuts, or even the best engravings, to give any idea of the appearance of enamelled bas-relief. It must be

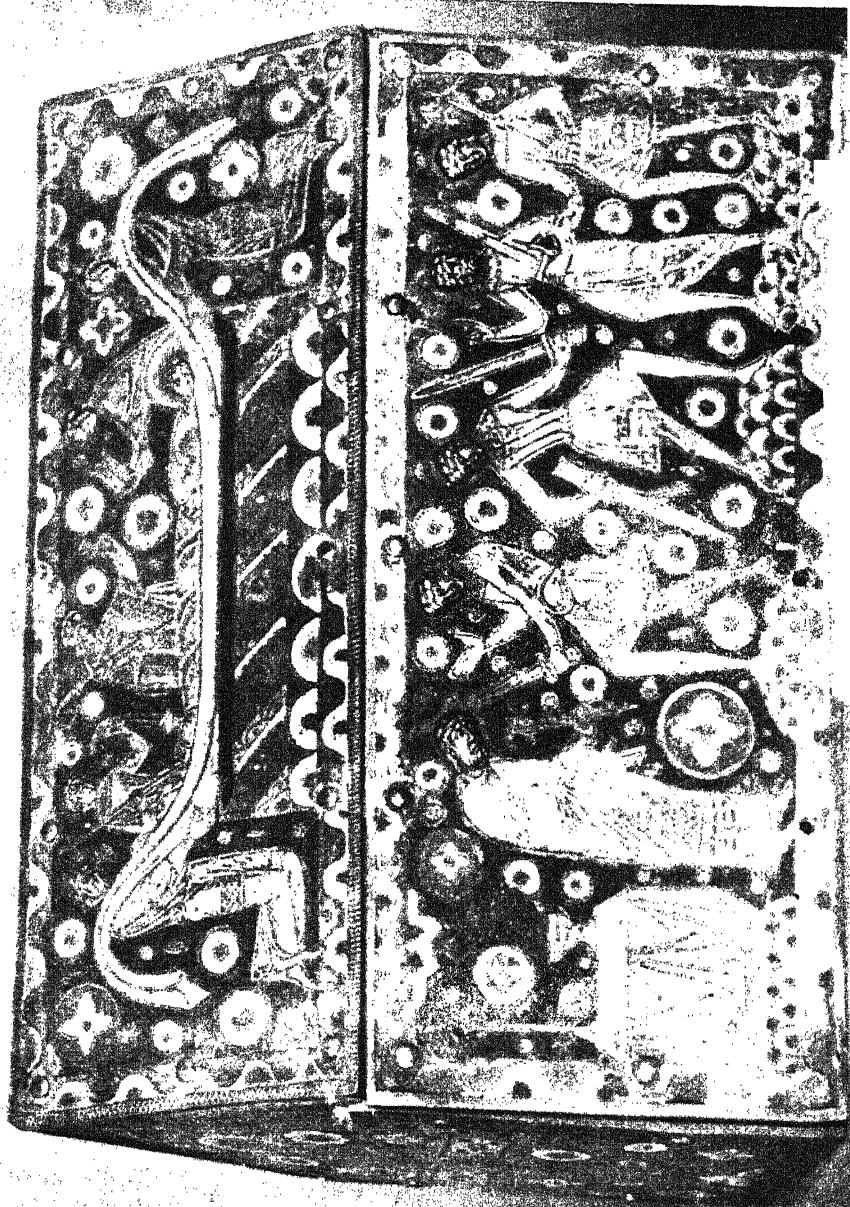
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seen to be appreciated. Some of the Italian pieces in blue on silver, laid over grounds punched or engraved in diaper patterns with figures, are quite exquisite. The best pieces existing, I think, are in the Louvre, and consist of a series of scenes from the life of our Lord.

This branch of art seems probably to have been of Italian origin. It is distinctly claimed as Florentine by Benvenuto Cellini, in his treatise on goldsmiths' work,¹ and he gives so good an account of it that I cannot do better than quote his description in the spirited translation of Mr. Ashbee:—

“Now let us have a talk about the beautiful art of enamelling, and therewith consider those excellent craftsmen who wrought best therein; and with the knowledge of their lovely creations before us see what is beautiful and what is difficult in this art, and get to understand the difference between what is really good and what is indifferent. As I said in the first chapter of my book, this art was well practised in Florence, and I think, too, that in all those countries where they used it, and pre-eminently the French and the Flemings, and certainly those who practised it in the proper manner, got it originally from us Florentines. And because they knew how difficult the real way was, and that they would never be able to get it, they set about devising another way less difficult. In this they made such progress that they soon got, according to popular opinion, the name of good enamellers.

¹ From “The Treatises of Benvenuto Cellini on Metal Work and Sculpture, made into English from the Italian of the Marcian Codex,” by C. R. Ashbee, and printed by him at the Guilds (of Handicraft) Press at Essex House. 1898.



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It is certainly true that if a man only works at a thing long enough, all his practising makes his hand very sure in his art: and that was the way with the folk who lived beyond the Alps.

“As for the right and proper way, about which I intend to talk, it is done in this wise: First you make a plate either of gold or silver, and of the size and shape that your work is to be. Then you prepare a composition of ‘*pece greca*’ (Greek pitch), and brick ground very fine, and a little wax, according to the season; as for the latter, you must add rather more in cold than in hot weather. This composition you put upon a board, great or small in accordance with your work, and on this you put your plate when you have heated it. Then you draw an outline with your compasses in depth rather less than a knife-back, and, this done, ground your plate anywhere within this outline, and with the aid of a four-cornered chisel to the depth which the enamel is to be; and this you must do very carefully. After this you can grave in intaglio on your plate anything that your heart delights in—figures, animals, legend with many figures, or anything else you like to cut with your graver and your chisels, and with all the cleanness that you possibly can. A bas-relief has to be made about the depth of two ordinary sheets of paper, and this bas-relief has to be sharply cut with finely-pointed steel tools, especially in the outlines; and if your figures are clothed with drapery, know that these folds, if sharply drawn and well projecting, will express the drapery. It is all a question of how deeply your work is engraved, and the little folds and flowerets that you figure on the larger folds may go to repre-

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sent damask. The more care you put into this part of your work the less liable your enamel will be to crack and peel off hereafter, and the more carefully you execute the intaglio the more beautiful your work will be in the end. But don't imagine that by touching up the surface of your work with punches and hammer it will gain anything in the relief, for the enamels will either not stick at all, or the surface that you are enamelling will still appear rough. And just as when a man cuts an intaglio he often rubs it with a little charcoal, such as willow or walnut wood, which he rubs on with a little saliva or water, the same you may do here when you cut your intaglio in order to see it stand out better, because the shine made by the metal tools on the plate will make it difficult for you to see your work. But, as owing to this the work gets a bit untidy and greasy, it is necessary, when you have finished it, to boil it out in a concoction of ashes, such as was described above for niello work.

"Now let us say you want to begin enamelling your work, and that it is in gold. I propose telling you first of how to enamel on gold, and then how to do it on silver. For both gold and silver the same cleanness is necessary, and in either case the same method; but there is a little difference in applying the enamel and also in the actual enamels applied, for the red enamel cannot be put on silver because the silver does not take it. The reason of this I would explain, were it not too long a business, so I'll say nothing about it, especially as to do so would take us beyond the scope of our inquiry. Furthermore, I have no intention of talking about how enamels are made, because that in

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itself is a great art, also practised by the ancients, and discovered by wise men; but as far as we are aware the ancients did not know of the transparent red enamel, which, it is said, was discovered by an alchemist who was a goldsmith as well. But all I need tell of it is that this alchemist, while engaged in the search of how to make gold, had mixed together a certain composition, and when his work was done there appeared among the stuff in the metal rest of his crucible a sediment of the loveliest red glass, just as we see it to this day. After much time and trouble, and by many mixings of it with other enamels, the goldsmith finally discovered the process of making it. This enamel is far the most beautiful of all, and is termed in the goldsmiths' art 'smalto roggio' (red enamel), or in French 'rogia chlero' (rouge claire), that is to say, and which means in other words, red and clear or transparent. A further sort of red enamel we have also which is not transparent and has not the splendid colour, and this is used on silver because that metal will not take the other. And though I have not had much practical experience of it, I have tried it often enough to be able to talk about it. As for the other, it lends itself more aptly to gold by reason of its being produced from the minerals and compositions that have been used in the search how to make gold. Now let us return to the process of enamelling.

"The method of enamelling is much the same as painting, for you can have as many colours as come within human ken. And just as in painting, so in enamelling you have them all ranged in order and all well ground to begin with. We have a

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proverb in the craft which says, 'Smalto sottile e niello grosso' ('Enamel should be fine, niello should be coarse'); and that's just what it is. You put your enamel in a little round mortar of well-hardened steel and about the size of your palm, and then you pound it up with very clean water and with a little steel pestle, specially made for the purpose, of the necessary size. Some, to be sure, have pounded their enamels on porphyry or serpentine stone, which are very hard, and moreover have done this dry, but I now think that the steel mortar is much better, because you can pound it so much cleaner. The reasons of this we may consider later, but because we want here to be as brief as possible and to avoid any unnecessary difficulties and useless confusion, all we need know is that the particular mortars in question are made in Milan. Many excellent men of this craft come from Milan and its adjacent territory, and I knew one of the best of them. His nickname was Master Caradosso, and he never wanted to be called by any other, and this nickname was given him once by a Spaniard, who was in a great rage because he was kept waiting by the master for a piece of work which he had promised to get finished by a particular day. When the Spaniard saw that he could not have it in time, he got so fearfully angry that he looked as if he would like to do him an injury, at which Caradosso, to appease his wrath, began excusing himself as best he could, and in such a plaintive tone of voice and such an uncouth Milanese lingo, that the irate nobleman burst out laughing, and looking him straight in the face, cried out in his high and mighty manner, 'Hoi cara d'osso.' The sound of

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this appellation pleased Caradosso so much that he never would answer to any other. When later on one fine day he found out what it really meant, he would gladly have got rid of it, but he could not, it was too late; I knew him as an old man of eighty in Rome, where he was never called by any other name than Caradosso. He was a splendid goldsmith, especially at enamelling, and I shall have more to say of him later on.

“Now let us proceed with the beautiful art of enamelling. As I said above, the best way of pounding enamels is in a little steel mortar with water. I found out from personal experience that the best plan as soon as the enamels are ground is to pour off the water in which you find them and put the powder in a glass, pouring upon it just so much aquafortis as may suffice to cover it, and so let it stand for about one-eighth of an hour. This done, take out your enamel and wash it well in a glass bottle with very clear, clean water until no residue of impurity be left. You must know that the object of aquafortis is to clean it of any fatty, just as fresh water is to clean it of any earthy impurities. When your enamels are all well washed in this way, you should put each in its little jar of glassware or majolica; but take great care that your water is so contained that it does not dry up, because if you put fresh water to them your enamels will spoil at once. Now pay great attention to what I'm next going to tell you. If you want your enamels to come out properly you must take a nice clean piece of paper, and chew it well between your teeth, that's to say if you've got any—I couldn't do it because I've none left, so should

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have to soften it and beat it up with a little hammer of iron or wood, whichever might be best; this done, you must wash out your paper putty and squeeze it till there is no water left in it, because you will have to use it as a sponge and apply it from time to time upon your enamels. The more your colours dry up during the process, the better they will look afterwards. Then, too, I mustn't forget to tell you another important thing which will also affect the good or bad enamelling of your work, and this necessitates your trying a piece of experimental work first.

“To this end you take a plate of gold or silver, whichever material you elect to cut your intaglio upon, and on this experimental piece—let us suppose it is gold—put all the different colours with which you intend to work, having made as many little hollows with your graver as there are enamels. Thus you take a little piece of each, and the only object of this is to make the necessary preliminary trial, for by this trial you find out which run easy and which run hard, because it is very necessary that they should all run alike; for if some run too slowly and others too fast, they would spoil each other, and you would make a mess of your work. All those preliminaries done, you may set to work at your enamelling; lay the nice clean colours over your engraved bas-relief just as if you were painting, always keeping your colours well covered up, and take no more out of one bottle than you can conveniently use at a time. It is usual, too, to fashion an instrument called a ‘palettière’ (palette-holder). This is made out of thin copper plate, and in imitation of fingers; it should not be bigger than

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your fingers, and there should be five or six of them. Then you take a lump of lead in the shape of a pear, with an iron stem to it, which would correspond to the stalk of the pear, and then you put all your bits of copper which you have hollowed out somewhat, one over the other on your pear stem. And this little finger-shaped palette you stand beside your work, and you put your enamels upon it, one by one, using due care. How careful you have to be with this cannot be told in words alone—you'll have to learn that by experience!

"As I said above, enamelling is similar to painting; though the mediums in the two sorts of painting in colours are oil and water, while that of painting in enamels is by dissolving them with heat. To begin with, then, take your enamels with a little copper palette knife and spread them out little by little very carefully over your bas-relief, putting on any colour you like, be it flesh colour, red, peacock, blue, tawny, azure, grey, or capucin colour, for that is what one of the colours is called. I don't mention yellow, white, and turquoise blue, because those colours are not suitable to gold. But one colour I forgot, and that was 'aqua marina,' a most beautiful colour, which may be used for gold as well as for silver. Then, when you have all your enamels of all colours placed in the best of orders, you have to be careful in the first coat, as it is called, to apply them very thin and neatly, and just as if you were painting in miniature you put each in its place exactly where it is to be. This done, have your furnace in order and well heated with charcoal. Later on I will tell you further of furnaces, and point out which are the best of the

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many different ones in use ; but now let us assume that you have in it a fire sufficient for the purpose of the work you have before you. Then having your furnace, as I say, in its place, you must put your gold work on an iron plate a trifle larger than the work itself, so that it can be handled with the tongs. And you must so ply it with the tongs and hold it to the mouth of the furnace that it gets warm gradually ; then, little by little, put it into the middle of the furnace, but you must take the greatest possible care that as soon as the enamel begins to move you do not let it run, but draw it away from the fire quickly ; so, however, that you do not subject it to any sudden cooling. Then, when it is quite cool, apply, just as carefully as before, the second coat of enamel, put it in the furnace in the same way, this time to a rather stronger fire, and draw it forth in the same manner as before. After this, if you see your work need further touching up with enamel in any of its courses, as is often necessary, judgment and care will show you how to do it. For this I advise you to make a stronger and clearer fire, adding fresh charcoal, and so put your work in again, subjecting it to as strong a heat as enamel and gold can stand. Then rapidly take it out, and let your 'prentice be ready, bellows in hand, to blow upon it as quickly as possible and so cool it. This you have to do for the sake of the red enamel, the 'smalto roggio,' of which we spoke above, because in the last firing it is wont to fuse with the others, and so to make new colour effects ; the red, for instance, going so yellow that you can scarce distinguish it from gold. This fusing is technically

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called 'aprire.' When it has once more cooled you put it in again, but this time with a much weaker fire, until you see it little by little reddening; but take great heed that when it has got the good colour you want you draw it rapidly from the fire and cool it with the bellows, because too much firing will give it so strong a colour so as to make it almost black.

"When you have duly carried out all these processes to your satisfaction, take some of your 'frasinella'—these were the bits of stones or sand that I described before when I told you about King Francis' filigree bowl—and with them smooth your work over until you get the proper effect. Then finish by polishing it with tripoli as I showed you above, also in the filigree bowl. This method of finishing, which is by far the best and safest, is called hand-polishing, in contradistinction to a second method by which, after you have your work smoothed with the 'frasinella' and then well washed with fresh water, so as to remove from it all dirt, you put it again on to the iron plate and into a clear fire, and thus slowly heat it. In this method, by which you get the effect of polish much quicker than with the other, you leave the work in the fire till it is hot, and the enamels begin to run; but its disadvantage is that, as the enamels always shrink a bit and shrink unequally in the firing, you cannot get so even a surface as by the hand-polishing. You have to take the same precautions, too, as you took when firing your 'roggio clero' or red enamel. In the event of your not employing the latter—as would be the case on silver—you must take great care to observe the same precautions in

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putting your work in, but do just the opposite in taking it out of the fire, that is to say, draw it very gradually from the furnace, so that it cools very slowly instead of very rapidly, as was the case with the red enamel. Of course, you may have to enamel a lot of pieces, such for instance as little pendants and bits of jewellery and such things, where you are not able to use the 'frasinella' at all. Things of this kind—fruit, leaves, little animals, tiny masks, and such like, are applied in the same way with well-ground and washed enamels, but cannot be similarly polished because of their relief.

“And if by reason of the great time and labour and patience you spend upon the doing of all this your enamels begin to dry up and thus fall off in turning your work, this you may remedy in this wise. Take a few quince seeds, which you get by cutting the fruit through the middle, choose such as are not empty, and let them soak in a vase with a little water: this you should do over night if you want to enamel the next morning, and you should be careful to do it very clean. Then, when you want to apply your enamels, having put a morsel of each colour on your palette (the finger palette I described to you above fixed on to the stem of your leaden pear), you mix with every bit of enamel you lay on your work, a tiny drop of this quince seed water, the effect of which is to produce a kind of gum which holds the enamels together, so that they don't fall, and no other gum has a like effect. For the rest, all you have to do is to carefully carry out the methods I have so far explained to you, and whether your enamel be on gold or silver, except in so far as I have told, those methods are the same.”

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At the Louvre Museum there are several interesting examples of bassetaille; of these the best are six small circular discs, each nearly three inches in diameter. They represent God, with St. John the Baptist and apparently Charlemagne; the Virgin with the infant Christ between St. Catharine and a martyr; the baptism of Christ; the scourging at a column; the nailing of Christ to the cross; the crucifixion. These splendid works have been illustrated in Labarte's "History of the Industrial Arts." The drawing is in the Franco-Netherlandish style, the folds of the draperies being very angular. The drawing is excellent, so is the composition. Of the sculpture of the gold that lies beneath the layer of enamel it is impossible to speak too highly. It is marvellous. The colours of the enamel are beautiful. There are red, yellow, blue, browns, an iron grey, and all so transparent as to give beautiful shades to the design, due to the varying depth of the glass lying over it.

The dresses are those of the time. The subject and treatment, while they exhibit the influence of the early Renaissance, are still strongly Gothic. This transition period, when the naturalism of the Renaissance came in to rejuvenate the somewhat ascetic rigour of the Gothic, is a very fascinating period. Italian art had passed through a somewhat similar stage nearly a century previously. It was soon to be extinguished by pedantic Renaissance, but as long as it lasted it produced some of the most delicate Christian work that has ever been executed.

In the Louvre also there is a reliquary in several stages which once ornamented the Chapel of the

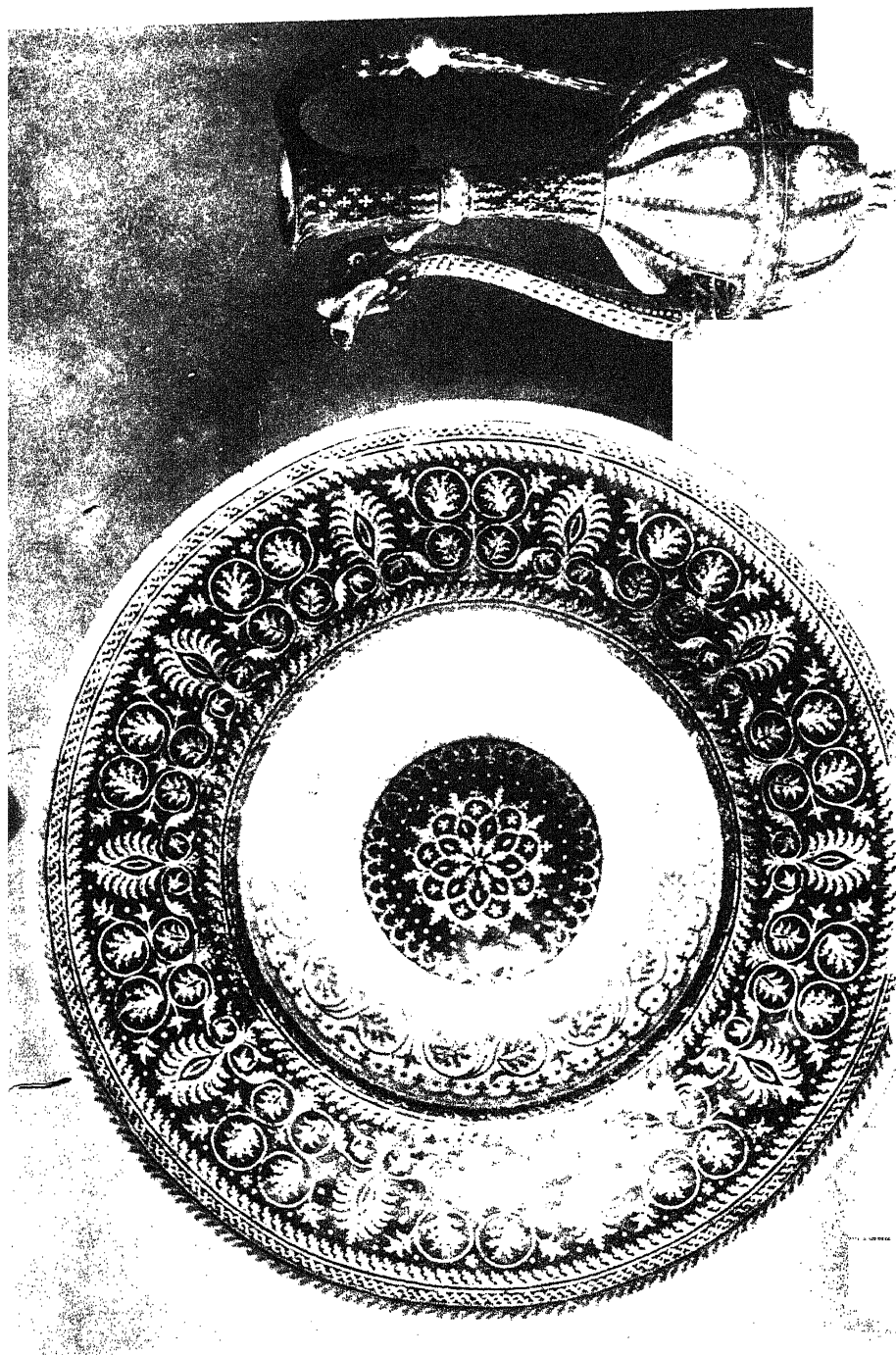
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Order of the Saint Esprit. The enamels here are translucent. A large "Baiser de Paix" comes from a similar source, and is also in the Louvre.

A shield which once belonged to Charles IX is ornamented with translucent enamels. It is in the Louvre, in which museum there is an oval mirror, the back of which is ornamented with translucent enamels. In our British Museum there is a piece dating from the year 1338. On the right is Philip VI seated on a chair with his feet on a lion. On the back is a crucifix. At the South Kensington Museum there is a cross which came from the Soltykoff Collection. It dates from 1351. It is either of German or Swiss make. At South Kensington there is a cup with a cover with translucent enamel "à jour," that is to say, which can be seen through. It is by no means certain that this piece is genuine.

In the Wallace Collection a diptych of gold is ornamented with pictures of Charlemagne, St. Louis, Pierre de Bourbon and his wife, accompanied by St. Peter and St. Anne. This is a French piece of work of the highest class, and well worth inspection.

The museum at Orvieto contains a splendid reliquary nearly a yard high whose hexagonal base is ornamented with translucent enamels. It is by Ugolino, and similar to one at Bolsena. Other specimens are to be found in the museum at Copenhagen, at Florence in the Baptistery and the Pitti Palace, and the "Riche" Chapel at Munich. There are also a large number scattered in private collections and in other museums.



CHAPTER VII

PAINTED ENAMELS

WE have now briefly reviewed European enamels up to the close, or nearly the close, of the fifteenth century.

They were executed in four or at most in five different ways. The enamel was simply applied in a layer on gold ornaments in relief, or it was applied to designs marked out by cloisonné; or else it was embedded in spaces cut out of solid metal, or again applied like glass in windows in the interstices of outlines or frames of fine work, so as to be transparent. Finally it was applied on low bas-reliefs and depended for its effect on the varying shades of colour due to its varying thickness.

It will be observed, however, that in all these cases it was used rather in the manner of precious stones inlaid in a setting. No one had thought of using it as a paint.

It is very difficult even to guess at the origin of painted enamel, and the true history of its discovery is probably for ever lost. It appears, however, most likely that it had its origin in Venice.

Towards the close of the fifteenth century the art of enamelling on glass was discovered. The author of the new art is unknown, but one of the

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first possessors of the secret was Angelo Broviero, a glass-worker of Murano. This secret was stolen from him by one of his workmen, who in his turn founded a family of glass-workers.

After all, there was no very great mystery in the matter. The great discovery was not of higher merit than those which are made in our time every month and every day.

But in the fifteenth century people were slow of invention. Like most of our artizans of to-day, they laid stress more on the possession of wonderful secrets than on the use of common sense and ingenuity.

The wonder only consisted in taking a glass that was very easily fusible, in pounding and grinding it up to an impalpable powder with a little turpentine, or perhaps with such a mucilage as fig-juice, and then using it with a paint-brush to paint upon vessels of glass of a more refractory character. The vessels were then put in the furnace, raised to a considerable heat, enough to melt the soft enamel which had been painted on them, and then annealed.

After all, it was only faience painting upon glass. And the materials used were those which were used by the faience painters, namely, an opaque white, made by dissolving in glass putty powder, or "*poudre d'étain*," which in its turn was only the skimmings from the melting-pots of the makers of pewter vessels. This material (which also to this day is used everywhere for polishing glass) gives a beautiful opaque white when melted up with pounded glass, and is in common use at present for enamelling glass, china, and enamelled vessels of all kinds.

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At first the newly discovered art was applied only on glass vessels. Next it was applied upon translucent enamels. These were executed upon a foundation of stamped or engraved silver, usually in some diaper pattern, which was to show through the layer of blue enamel placed upon it.

The next step was one of greater difficulty. Up to this time enamels had all been done on thick plates of copper or of gold, or else on thin plates made rigid by means of cloisons.

Any attempt to cover one side of a thin flexible plate with enamel results in this, that the enamel as it cools peels off the thin plate. On a thick plate, well scored with marks or deeply engraved, the enamel is held pretty firmly. The problem was how to make enamel adhere to a thin plate.

Some one discovered that if you put enamel on both sides of the thin plate, taking care that the enamel on the back is of the same quality as that on the front, then as they cool they shrink simultaneously, holding the metal firmly between them. The covering of the back is called the counter-enamel, and all enamels, or practically all enamels, executed in the sixteenth century and onwards are done in this way. The art which thus came into existence was little used in Italy. But it spread to France. For years the glass used for beads in Venice was brought to France to be used by enamellers, and if the French did not actually discover the new method, they perfected it, and were the first to turn it to an artistic purpose.

It was naturally among the French glass painters at Limoges that the new process was practised, and glass-painters accustomed to use furnaces,

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and to understand how to manipulate glass, were obviously the only artisans capable of utilizing the discovery.

The earliest work in France was usually done by first covering a thin copper plate with a layer of white enamel on the front, and a counter-enamel of waste, brown, black, or blue. The white enamel was the same as that used for enamelling on glass, and the same in composition as the glaze used by faience painters, except that it was rather softer.

Upon this white surface a copy was made in black, of one of the rough woodcuts of the day. Such work as that of Albert Dürer, or the school of engravers of France and the Netherlands, was employed. Just about this time the art of book-making had undergone a change. Illuminated manuscripts were being replaced by printed books. The woodcuts in these were highly painted up, and the folds of the draperies were touched up in the high lights with gold. These formed the models of the practitioners of the new art. The outlines in black on the white enamel were exactly like ordinary woodcuts.

The plate was then put in the furnace and the design burned in. The result was not very different to a painting or print in black, over glaze, upon a common china plate, except that the lines were coarser and blacker.

Over the picture thus formed, enamels of different colours were put. The enamel was in fine powder, wet, and was put on partly with a brush, partly with spatulas, until the whole had been covered over like a parti-coloured pattern, in fine sand, of different colours. This was then well pressed down,

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dried and fired. The result was a print, coloured with vivid colouring. For flesh tints the enamellers were in a difficulty. They do not seem to have had any pinks at their disposition. Pink glass could then only be made with gold. Red could be made from copper, but only of such a deep tint as to be useful in mere washes or "flashing," as it is called, on ordinary white glass, to give the tones of red in windows. The enamellers were therefore reduced to using the nearest colour to pink they could get. They used glass coloured with manganese, which, by a liberal use of potash in the manufacture, was rendered as pink as possible. But manganese glass is always of a lilac shade, and therefore the faces of the figures by the earlier enamellers invariably have a curious violet tone. Their range of colours was small. They had splendid cobalt blue, and an excellent turquoise made from copper, and good browns of more than one tint made from iron and manganese. Black they got by mixing up a strong dose of all the other colouring matters, like the glass of beer-bottles of our day.

Then, to heighten the effect, they took gold in powder, which, as I presume most readers know, is made by grinding up gold-leaf with honey and water, and with delicate brushes they stippled up all the high lights of the draperies. They did not stop here. They put gold stars all over the sky, all the architecture of the background was touched up with gold, and in fact gold was everywhere. Then they used another glass-maker's trick, which had also been long known. They took small scraps of thick gold-leaf, stuck them down to the surface

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of the enamel by heating it in the oven, and then covered them over with solid little lumps of enamel, which were also melted on. In this way they covered the borders of the robes and the tiles on the floor with the representation of jewels laid on foil, so that the personages in the pictures, like the characters in the palace of Psyche, might appear to "walk on precious stones." This gaudiness of taste will not appeal to persons trained in the "chiaroscuro" school, who desire accurate drawing, simplicity, and a due balance of light and shade. But it must be remembered that these triptychs and shrines were for use in chapels and cathedrals so dark that one could hardly see (and no one needed) to read. Dark pictures would be lost in such places. It needed something to pierce through the gloom. At Chartres, even to-day, and when some of the old windows are gone, one can hardly see to read in dull weather.

It is also hardly fair to consider these works as pictures. They were put in place of enamelled shrines which were formerly a branch of the jeweller's art. If pictures were wanted they could be painted in a much simpler fashion with materials not presenting a tithe of the difficulty of execution. The enamels of the early French school must be looked at from the point of view of those who executed them, and with a reference to the use for which they were intended. Let any one put one of them in a dark room, with the curtains almost drawn, and compare it with surrounding oil-paintings, and the above remarks, I think, will appear justified. There are also a simplicity and directness, and a purity of feeling and colour, in

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these early works that appeal to one even when seen in modern museums, in lights and with surroundings very different from those of a chapel or oratory of the sixteenth century.

Two of the most ancient pieces of painted enamel that are known are monstres, one of which is now in the Hermitage Museum, St. Petersburg. They date probably about the middle of the fifteenth century, and are distinctly Venetian in execution.

The learned M. Molinier is of opinion, after reviewing all the authorities on the subject, that two small pieces now in the museum at Poitiers, in colours on a black ground, which probably are French, inasmuch as they represent French costumes, were made about the middle of the fifteenth century. He also calls attention to two others, in brown, on a translucent ground, now in the Louvre.

Another very interesting piece is executed very finely in gold paint, upon a ground of black enamel. It is on a thick piece of copper, not counter-enamelled; but the two pieces above mentioned at Poitiers are counter-enamelled.

A number of other early works, executed on a white ground, bear the signature "Monvaerni." Nothing is known whatever about this painter.

Besides these, it appears that in Venice, before the end of the fifteenth century, a regular manufacture came into existence of copper enamelled vessels, bottles, plates, and bowls. These may be seen in most museums. The design has a very Oriental look, though one can clearly see that it is not Oriental. The usual colours employed were

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green, white, and blue, laid over plates or beakers of a somewhat Oriental form. These were ornamented with fern-like patterns in gold-leaf, put on, no doubt, with some slightly adhesive material, and then glazed over and fired. The illustration shows a fine plate of this description, the property of Mr. Taylor. The centre is green, the borders white and blue.

We next have to consider the Limoges school of enamellers, who executed most of the painted enamels now seen in museums and collections, and whose works began about the commencement of the sixteenth century and declined about the end of the seventeenth. The labours of French antiquaries, among whom may be mentioned M. Darcel, M. Bourdery, and the Abbé Texiel, have done something to identify the various workmen; but after all their efforts, the subject is in the greatest confusion, and out of the crowd only five or six names emerge to which any definite personality can be attached.

They probably guarded their secrets as well as they could; hence the art was transmitted from father to son. We find prominent among them the following families: The Penicauds, the "Limousins," the Nouailliers, the Reymonds, the Courteys, the Courts, and the Laudins. These families were to some extent contemporaries. In describing their work, however, it is best to group them by families, to avoid confusion. I do not propose to go in detail into the genealogies, which after all are somewhat conjectural, and are really necessary only to antiquaries, or to those who are engaged in verifying the authenticity of enamels,



THE ADORATION OF THE SHEPHERDS AND OF THE MAGI
NORTH ITALIAN PAINTED ENAMELS ON SILVER, IN BRILLIANT TRANSLUCENT COLOURS, LATE FIFTEENTH CENTURY

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and I shall direct chief attention to certain selected prominent men.

The oldest of the Penicaud family is Nardon, a French abbreviation for Leonard. He was born probably in the last quarter of the fifteenth century, and lived up to about the middle of the sixteenth. The family is supposed to have come from the village of Aureil. Unfortunately it is very difficult to decide what existing works are really by his hand. There is one signed by him in the Museum at Cluny, Paris. (For the signature, see Darcel, p. 101.) He appears to have been a rich man, owning many houses. In 1495 he gave a charity for clothing the poor, and he seems to have lived for about half a century after that.

The attribution of other enamels to Nardon is based on their resemblance to the piece above mentioned. His method was to cover a somewhat thick plate of copper with white enamel. The plate was usually flat, and not convex, as is the case in later work. Upon this white plate a roughly drawn sketch was made after one of the engravings of the period. The prayer books of Simon-le-vostre were often used. The pigment employed to make the black was probably glass, with a mixture of iron, copper, and manganese, all very finely ground together, and laid on with varnish as a medium, or perhaps with fig-juice, or the juice of onions, or perhaps the mucilage obtained by boiling the pips of apples and pears.

The drawing was then fired. We do not know anything of the sort of furnaces used for this purpose. Perhaps they were after the fashion of those described by the monk Theophilus. They were

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probably of a very primitive order, consisting of a good clear charcoal fire, with a plate of iron or fire-clay laid on it, on which the enamel rested. Probably a cover of sheet iron, or else of clay, was put over the enamel, and the glowing coals heaped over them. Smaller articles were put in an iron spoon, covered with an iron cover, and plunged into the middle of a charcoal fire. This is a very simple and efficient method, and one that may be recommended for use at the present day. The style of these works is easy to recognize. The women's faces have a very characteristic form and expression. The foreheads are high and rounded, giving the faces a mild but rather silly look. The hair is parted in the middle, and combed smooth on the head. Most of the women have caps or kerchiefs on their heads. The drapery is of the kind so common in German and Flemish art, abounding in folds with hard, angular corners, such as one might make out of crumpled paper.

As soon as the enamel was outlined in black, it presented the appearance of a print. On this surface coats of powdered coloured enamels were laid in juxtaposition ; just as one might colour a wood-cut.

The edges of these layers were brought up so as to touch one another, then dried and melted in the furnace. The colours employed were a fine turquoise blue, which is very characteristic, and made out of any salt of copper and glass in which soda predominates to the exclusion of potash. There was a splendid royal blue made from cobalt, a rather mustard-coloured yellow, also one of the colour of curry-powder, a brown, and a violet

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colour made from manganese; and as they had no reds, the faces had to be glazed over with a very weak mixture of this violet, which gives them rather a corpse-like look. As soon as the work had got thus far, opaque white enamel, made out of putty-powder, was then painted on the high lights, much as we see it done in some drawings on brown paper, and then these high lights were glazed over again. Blood was represented by opaque painting with rouge. In their restricted use of this pigment the old artizans showed their taste, because a mixture of transparent enamels with opaque overglaze painting rarely succeeds. It is as if we should try and unite a piece of fresco painting with chalky lights and faint shadows, in the same canvas, with the colour of Titian or Tintoret.

As soon as this was done, the next point was to stud the whole picture over with jewels. This was really done, I suspect, to impose on the ignorant, and give an air of value to the shrine. For in true mediæval days, when the intercession of saints or of the Virgin was a living belief, it had been customary to present jewels of considerable value to be fixed upon religious pictures.

The jewels used on enamels generally consisted of lumps of glass, melted on to the picture. We find greens, blues, and, what is most curious, a crimson-red. It would be very interesting to know of what this red is made. It can hardly be sub-oxide of copper, because, though that substance will give a red colour to enamel, it is so very deep as to appear black when in a mass, and there is no way of weakening it down. With any weakening the metal gets oxydized, and becomes green.

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If the red was made with gold, then why was it not used for mantles, or other parts of the picture? One can only surmise that it was very expensive, and came from Venice, and that only little bits could be spared. But, if so, why was it not used to tint the faces which, in connexion with a little yellow, it would have done admirably? There seems no answer to this question.

The picture in this state must have resembled a gaudy chromolithograph. It is not unusual in books to laugh at these early efforts. With this view I cannot agree. I think the composition of Nardon's pictures is sometimes very good. The drapery is beautifully arranged and the balance of the picture admirable. I should much like to see those who laugh at them try their hand at similar compositions.

The last step was to use fine gold in powder, such as we now name "shell-gold," because it is sold in shells. It is made by grinding up gold-leaf with water and honey. With this they covered the whole picture. Little gold clouds were made to float in the sky, gold threads of wavy hair were superimposed on a yellow ground, the high lights of the drapery were touched in in gold, and in fact the whole picture was overdone with this material.

To make the gold adhere they used some borax—a fatal practice. It is lamentable that the use of this pernicious material should still be continued in our modern church windows. Of course, a great part of our modern work is so bad and devoid of spirit that it will be rather a gain that it should perish; but there are some windows by Burne-Jones



VIRGIN AND CHILD

GERMAN ENAMEL AT SOUTH KENSINGTON MUSEUM



MEMORIAL CASKET WITH BUSTS OF THE ROMAN EMPERORS
IN SUBBED ORANGE COLOURS, FROM THE PENICAUD ATELIER

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and Morris that deserve a better fate. For borax is very hygroscopic, and the steamy air of a church condenses on the windows and streams down the glass, gradually dissolving the painting away.

The use of borax is dictated by ignorance, for by the preparations of a proper flux it can be rendered entirely unnecessary.

The effects of this fatal use of borax are to be seen in an enamel by Nardon Penicaud at South Kensington which was formerly in the Spitzer collection. I have never seen this work except covered with fine, greasy-looking drops like perspiration. The gold in consequence has mostly gone, but probably the general effect is enhanced by the loss, for it is evident that when new the use of the gold must have been excessive.

The charm of this somewhat barbaric work is in the sentiment of it. The faces are childish; indeed, somewhat imbecile. But about the Virgin and the angels there is a sweet look of innocent purity that we quite miss in the pictures of Doré or the modern French religious school. These figures look as though they had just come out of heaven and brought with them a fresh breath of celestial repose and joy, the blues are so unsullied, the whites so pure.

Surely, if one had to choose, one would rather go into the bright, clear heaven of Botticelli or Van Eyck, than into the muddy, cloud-covered heaven of Murillo.

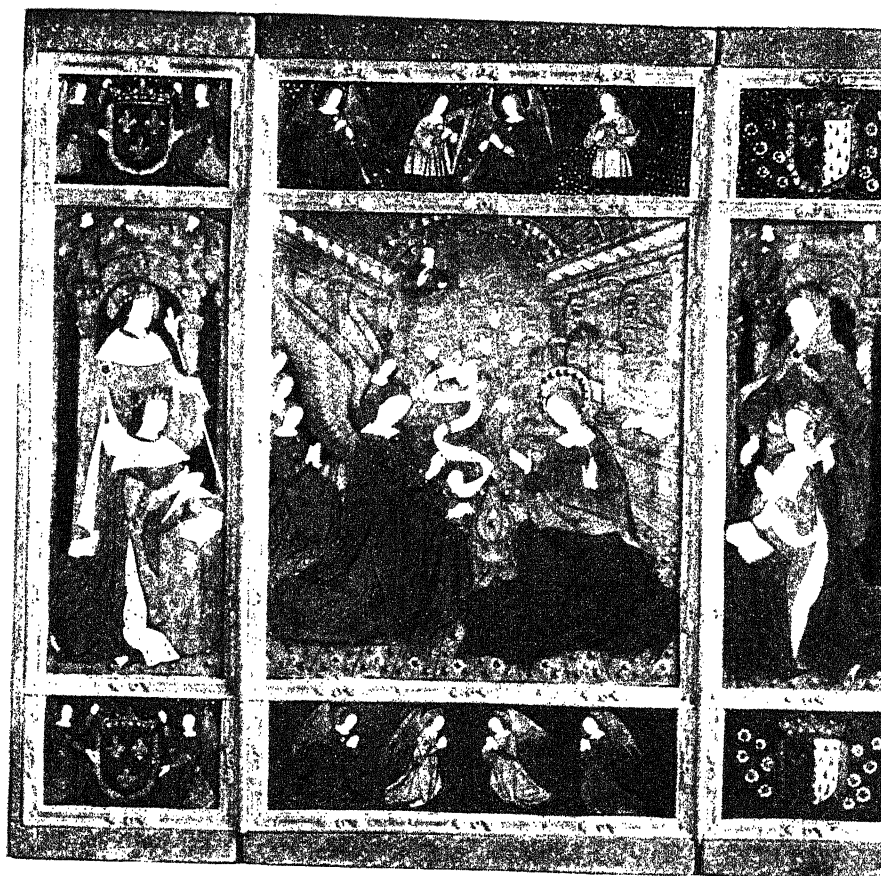
In these enamels we are at the parting of the ways. Although it is evident that the renaissance has begun, as is shown by classical pillars and capitals wreathed with festoons of laurel, yet the

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backgrounds reveal the pointed roofs and spires of mediæval Flanders and France. Although the curly, golden locks of the angels betray far more of a feeling for the pleasures of the toilette than would have been considered seemly to a Byzantine or early Gothic artist, and the joy in bright colour and rich gold and jewels is frankly avowed, yet there is a distinct remnant of mystic and even of ascetic feeling. It is an interesting study this period of art, when the good knight Joshua, in the latest fashion of French steel armour, routed his mail-clad enemies; and yet while devils, bred of the horrible dreams of St. Anthony in his desert, had not yet been banished from religious compositions.

In these earlier painted enamels of the Nardon Penicaud period the backs are of various colours, and the copper is usually stamped with the letters L.P. and a crown. Sometimes cracks are seen half healed up by the heat of subsequent firing. Such cracks as these indicate that the enameller has used glasses of varying compositions—they never occur when the material is of uniform composition.

The mode of framing these enamels is also peculiar. They are enclosed in brass moulded frames, which have obviously been cast, and then brazed together at the corners. At intervals very pretty little ornaments are riveted on, consisting of a twisted stalk, with a leaf at each end. The inspiration of these is distinctly Gothic—the effect charming. The whole has been thickly gilt by the mercurial process. The frames are usually put in covers of wood, painted red, sometimes with little diaper patterns on them. Generally they are in the



THE ANNUNCIATION
FENICED

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triptych form, which could be shut up, so as to serve for portable altars for private devotion, in rooms otherwise devoted to secular purposes.

In many cases the wood covers were clothed with parchment, painted with various designs.

One cannot perhaps call this great work. It had somewhat the air of work turned out in quantity. And yet when seen in museums there is something very fascinating about it—perhaps for the reason that it has come down to us almost as fresh as the day it was made, and has not that ruined appearance that attends so much of what survives of the work of the fifteenth century.

In the Louvre there are four enamels attributed to Nardon—the Crucifixion, a Pietà, and two of the Coronation of the Virgin. The remaining artists of the Penicaud family were related, but it is very difficult to know in what degree. The more celebrated are as follows:—

John Penicaud I (senior).

John Penicaud II (junior).

John Penicaud III.

Peter Penicaud.

There are two other artists who, from similarity of style, are treated as akin to the Penicauds, namely, one who signs K.I.P., and another called Martin Didier, to whose name the mysterious addition "PAGE" is sometimes added. The characteristic part of the work of this family is, that they used to stamp the copper with the monogram I.P.

The work of John Penicaud II exhibits a delicate feeling for the best side of the Italian school, which

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was just coming in, but with a considerable remnant of Netherlandish art. He was a remarkably good artificer, and used paillon very extensively and with effect. The later Renaissance hardly affected him at all. There is a very fine group of enamels by him at the South Kensington Museum, consisting of a series of scenes from the life of Christ, all united in one frame. In this remarkable work the enameller shows that he knew every secret of his craft—paillon, grisaille, gold-red, and the most exquisite overglaze gold work. The enamels do not exhibit any flaws or cracks, the workmanship is perfect; in fact, for pure technique, he must be considered as at the head of the craft.

As a colourist, too, he ranks very high. It appears to be the custom in France rather to underrate him in this respect, but that probably is because the French do not like vivid colour. The scheme of colour of Penicaud II is intense without being gaudy, for he has the art to use a sufficiency of darker colours to carry off the effect of the brilliant ones. Hence, his work is eminently adapted for shrines and other church ornament. (For his signatures see Laborde, I, pp. 146, 153.)

John Penicaud III exhibits the full effect of the Italian Renaissance. M. Laborde considers that Parmigiano seems to have had the most influence over him.

This Italian artist is very interesting. He was a follower of the school that came from Raphael, through Giulio Romano. Sir Joshua Reynolds particularly admired his works, and made a collection of his drawings, and there is one portrait of a lady with her hair bound up, and in flowing white



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dress, by Parmegiano, that at first sight one would certainly have taken to be a sketch by Reynolds or Gainsborough.

Penicaud III is represented in the Louvre Museum by six pieces, mostly in grisaille, with tinted flesh. It is to be observed that by this time the use of gold-red, as a glaze over white, had been discovered, so that flesh tints were no longer of the pale violet colour, made from manganese, of former times.

It appears also remarkable that the originals of Penicaud III's enamels have not been found, whence it has been concluded that he was not a mere copyist. If this is so, he deserves high praise as a composer.

He mostly worked upon a black ground. The subjects are two of the Virgin, two of Moses, one of Noah, and a sacrifice to Mars, which shows that the man who could choose such a theme must have been under the full influence of the new tide of Italian art. Thus in a cup on which is drawn the Purification of the Virgin, he has introduced naked figures of soldiers bathing, trophies of arms and arabesques.

Pierre Penicaud is supposed to be the younger brother of Jean Penicaud III. His style is similar, but very inferior. He generally signs P.P., and works with grisaille on a black ground, with gilding in some of the details. The work has the uninteresting, pretentious character of almost all the followers of Giulio Romano. There is not the least religious feeling in any part of it, and the painter seems to have preferred Mars and Venus as deities. The old conceit that served every artist after Raphael,

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of soldiers surprised bathing, enables him to perpetrate the absurd folly of soldiers fighting desperately without any armour or clothing.

In one of his pieces we also find Neptune in the waves, surrounded by nereids and tritons, and seated with a trident on a conch-shell. How often, in a visit to some old French château, we see the venerable head of Neptune, crowned with shiny weeds, with dolphins blowing out jets of water, and puffing tritons gambolling about with nereids, whose muscular frames are hung with rolls of flesh! The moss grows over them, they are now too often half ruined, yet we love them too; for they raise up pictures of witty marquises, and beaux with pink velvet coats and shoes with high red heels, who were willing to die for a jest, and often not unwilling, unfortunately, to sell a woman's honour for a pension, or a commission in the guards. But those were in the good old days of the *ancien régime*, "when Vice lost half its wickedness by losing all its grossness"—days perhaps better to read about than to live in.

The enamels of these four Penicauds represent the change which took place in French painting in the earlier part of the sixteenth century, about which it may now be convenient to say a few words.

The outburst of art in France in the thirteenth century—an art typified in the life of St. Louis—so pure, so graceful, and so original, came to an end in the wars which desolated the country. It was succeeded by art of Netherlandish origin. The school of the Van Eycks gave rise in Germany to those of Holbein and Dürer. At least, if it did not give rise to them, it very largely influenced them.



MADONNA AND CHILD
IN GRISAILLE, BEARS THE PENELOPE PORQUON

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The same art produced in France a series of painters whose beautiful work may be seen in the missals and books of hours of the fifteenth and sixteenth centuries. The foundation was Gothic. It was imbued with simplicity of aim, purity of colour, and refinement of feeling. But all this changed after the expeditions of Charles VIII and Louis XII into Italy.

Intellectually, Italian art, during the fifteenth and the early part of the sixteenth centuries, made enormous progress. The wonders of that age in Italy can be appreciated only when we remember that it saw Masaccio, Filippo Lippi, Angelico, Mantegna, Leonardo da Vinci, Verrocchio, the Bellini, Carpaccio, Titian, Tintoret, Veronese, Fra Bartolommeo, Perugino, Michael Angelo, and Raphael, besides Niccolo Pisano, Donatello, Ghiberti, Della Robbia, and a host of others, any one of whom would in other times have been the greatest artist of his day.

We have no proof, however, that the art of Italy influenced France much until the reign of Francis I. The King, whose character seems somewhat to have resembled that of our own Charles I, was distinguished by vanity, gallantry, and a decided taste for magnificence, with a mediocre taste for art.

As soon as he came to the throne, he endeavoured to secure the services of Raphael, but, failing this, was obliged to be content with Andrea del Sarto, who arrived in France in 1517; but soon afterwards left abruptly, it is said, with the money in his pocket for several unexecuted pictures.

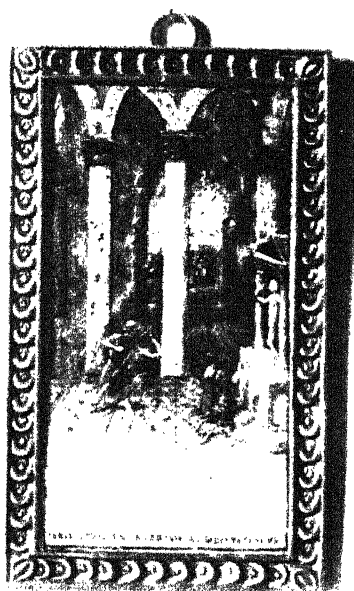
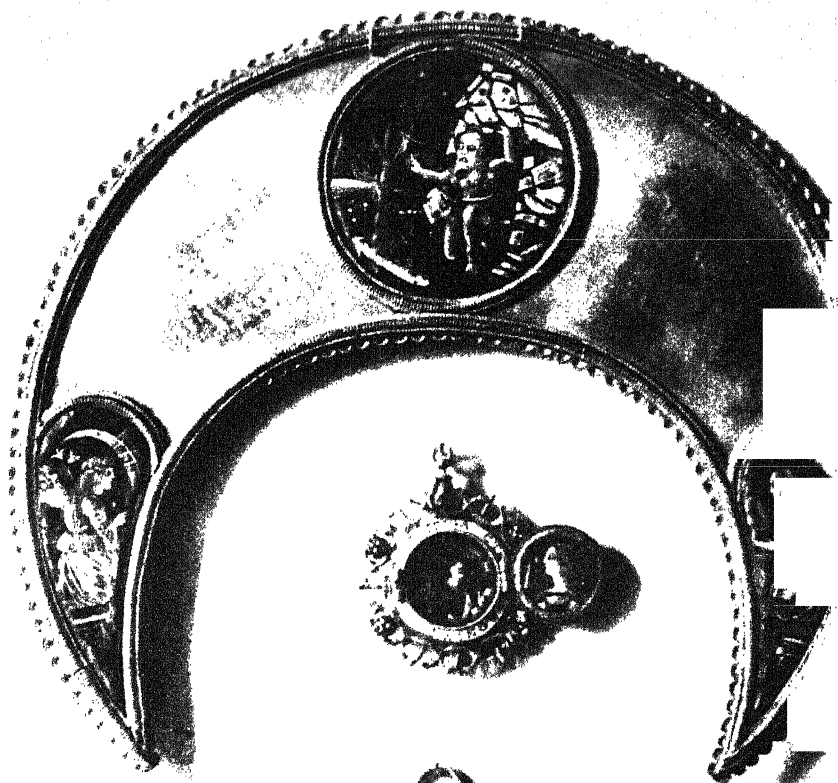
In 1519 the aged Leonardo da Vinci, who had

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been induced to spend his last years in an inclement northern climate, died at Cloux. A pleasant fiction relates that he died in the arms of the King.

Then followed the ill-fated expedition of Francis I into Italy, and his capture at Pavia, and imprisonment in Spain. As soon, however, as he got free and returned to France, he indulged the passion for building that added so much to his own fame and did so much to impoverish his country. Palaces rose at the Louvre, St. Germain, La Muette, Chambord Chalmay, Foltembray, Villars-Coteret, and Fontainebleau, and at Paris that curious fancy known as the Château de Madrid, adorned with the priceless pottery of Bernhard Palissy, which, unfortunately, has now been destroyed.

In order to understand the art of the time of Francis I, it is necessary to remember that the mode of life, when he came to the throne, was still after the fashion of the Middle Ages. Even kings possessed only one set of tapestries and plate and silver, which was carried about with them. The windows and doors were very imperfectly made, and glass was rare; hence, to render them habitable, the walls and doors were covered with hangings, which were carried about with the Court. Thus, when the king was away from a palace, it was unfurnished and deserted, and the windows were without sashes. Even the locks on the doors were portable, being removed and fixed up as required. It was from Italy that the idea was derived of permanent ornament on the walls, of fresco or in paint. Thus, then, people bivouacked in rooms rather than lived in them, and one chamber served for sleeping, receptions, and meals.



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A large bed in one corner was provided with tapestries to keep off the draughts produced by the ill-fitting windows; and toilette requisites, and plates and dishes were brought in and removed, and travelled about with their owners. In these châteaux one does not commonly find the huge kitchens which form so conspicuous a feature in old English houses. At Versailles the meals were cooked in the attics over small charcoal fires.

At that time the greatest painter of the French style was Clouet. In accordance with Court etiquette a painter was classed as a craftsman, and, as such, however great his genius, had to rank below all the menials of the royal palace. Therefore, to bestow upon the most distinguished artists some social position, it was the custom to give them the honorary title of valets to the King, which, without committing the terrible breach of decorum which would be involved in making a craftsman a gentleman, still put him above the rank of the common servants.

The duties demanded of a Court artist were multifarious; thus at a later period Poussin wrote: "I shall never understand what is desired of me, for it is impossible to work at the same time at frontispieces of books, a virgin, at the picture for the congregation of St. Louis, at the designs for the gallery, and for the King's tapestry. I have only a feeble head, and am not aided by any one."

Clouet was one of these valets, as was also the poet Marot. Clouet's distinguishing qualities were truth and grace. He was distinctly a follower of the Netherland school, and consequently his portraits resemble those of Holbein and Dürer, not

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those of the Italians. He was very popular among the band of native French poets who still kept alive the traditions of the older natural school, before the literature of France became infected with classical pedantry. Thus Ronsard writes of Clouet :—

Peins moi Janet, peins moi je te supplie
Sur ce tableau les beautés de m'amie,

Après au vif, peins moi sa belle joue,
Pareille au teint de la rose qui noue
Dessus du lait ou au teint blanchissant,
Du lis qui baise un œillet rougissant.

Leve les mains ; ha mon dieu, je la vois !
Bien peu s'en fait qu'elle ne parle a moi.

(I may, perhaps, be pardoned for reminding the reader that in old French poetry the final e, which is mute in prose, is pronounced if followed by a consonant ; thus “rose” in the fourth line has two syllables.)

A considerable number of Clouet's portraits remain—some at the Louvre, others in private collections in Touraine and elsewhere.

But the art of Clouet was destined gradually to disappear, together with the Franco-Netherlandish art.

Francis I requested Giulio Romano, then working at Mantua, to send him Primaticcio, the best of his pupils, and a painter of undoubted merit. His style may be gathered from the few works of his that survive. His female figures were elegantly drawn, with the slender waists, elongated proportions, and delicate feet and hands, which long

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remained models in French art. He was appointed to superintend the works at Fontainebleau. Tradition related that a hound named Blaut had discovered a fountain in this place. Accordingly the spring in the hands of Italian mythologists became a nymph, nude of course, and reclining among rushes with a dog at her side and an urn whence flowed the water. A very original treatment, which Primaticcio improved by depicting Francis I in the congenial occupation of discovering, not only the nymph, but a whole army of them in the act of bathing. He also painted a picture of "Diana the Huntress," now in the Louvre, which is interesting as being probably an authentic portrait of Diana of Poitiers. Much of the work of Primaticcio at Fontainebleau has perished or been repainted.

Rosso, or Le Maître Roux as he was called in France, was a man of much less refinement. He had left Arezzo after attacking a priest who had excited his anger by boxing the ears of a chorister in some church in which he was at work. He came to France in 1531, and designed a considerable part of the galleries at Fontainebleau. Finally, however, having falsely accused a friend of theft, and even procured him to be tortured, he was so overcome by shame that he took poison. His figures are like his character, muscular to the verge of violence and distortion.

Primaticcio was not only employed to paint and design, he was employed by Francis I to procure specimens of Italian art. In 1540 he brought back 180 statues, and a large quantity of busts, besides a number of moulds of the most famous antiques, which were afterwards cast in bronze in France.

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In order to give Rosso and Primaticcio a better social position, Francis I made them both abbots.

The introduction of these antiques had an overpowering influence upon the art of France. The effects of them on such a man as Jean Goujon are obvious. The classical allegory thus introduced unfortunately put an end to all the beautiful developments which native French art might have produced for us, but it was at least refined. It was not till the second invasion of the Italian Renaissance, when the debased style of the Caracci came in, that French art took the downward course that ended in the inanities of Madame de Pompadour. But Frenchmen are never capable of reverence for what is ancient. They generally break their old idols when they cease to worship them.

The most important enameller influenced by the new art was Leonard Limousin. He was born in the early years of the sixteenth century, and died in 1577. He was the son of an innkeeper named Francis, and had a brother, Martin, also an enameller, but of no great repute.

THE LIMOUSIN FAMILY

Leonard Limousin seems to have commenced by painting and engraving, and no doubt it was his practice of these arts that brought him within the influence of the Italian school. Even, however, in the year 1532 he was still under Netherlandish and German influence, and it was not till 1535, when he executed a series of enamels illustrating the Story of Cupid and Psyche after Raphael's designs, that he became entirely an artist of the Renaissance.

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In 1545 he was ordered by Francis I to execute a series of enamels, after the drawings of a painter named Michael Rochetel.

In the accounts of expenditure on royal buildings the following entry occurs: "To Michael Rochetel, painter, for 12 paintings in Colour on Paper each one of two feet and a half and on each the figure of an apostle that is to say the twelve apostles of Our Saviour and a bower also painted to each picture to serve as a pattern for the enameller of Limoges, enameller to the King, to make after these patterns twelve pictures in Enamel." The enamels were finished in 1547, but they only arrived at Paris after the King's death, and his successor, Henry II, immediately handed them over to his mistress, Diana of Poitiers, the Duchess of Valentinois, to ornament the chapel of the famous Royal Palace of Anet, which she was then decorating.

There they remained, framed in sculptured wood, until the destruction of the palace in 1802, when they were handed over to St. Peter's Church at Chartres, where they now remain. The enamels are executed in colour on a white ground, having somewhat the air of majolica, and measure three-fifths by one-fourth of a metre each. They are touched up with gold. Each enamel is surrounded with a group of auxiliary enamels containing the name of an apostle, and the salamander, the device of Francis I. Leonard subsequently commenced another series of apostles, in which he introduced the execrably bad taste then in vogue in Italy of representing his patrons as apostles. Francis I was figured, perhaps appropriately and intentionally,

EUROPEAN ENAMELS

as the doubting Thomas. For these twelve apostles Leonard received the sum of five crowns.

In 1548 he was made valet of the King, in accordance with the usual custom as regarded artificers of the first class, and received a salary of 160 livres. He prospered, and a few years afterwards the records show that he became a landed proprietor. He seems to have had a taste for antiques, for there is still in the cabinet of antiques and medals a bronze Mercury with silver eyes, which was dug up in a ditch at Limoges, and which once belonged to him.

Leonard had two different styles, one which he used in dealing with the classical subjects then in vogue, the other for portraiture. The first of these styles resembled that of the school of Giulio Romano. The attitudes of the figures were affected, the muscles exaggerated, and the whole composition has an air of sensuality which is strongly characteristic of Italy of the sixteenth century. On the other hand, some of the figures are not without refinement. The drawing is good, but very bold—rather what one would call a slashing style.

A description of some of the pieces may make my meaning clearer. For instance, in the Louvre there are four fine plates of the series above described of *Psyche*. The first of these, about six by nine inches, represents one of Raphael's thirty-two plates, engraved by "le maître au dé." (See Bartsch's reprints, vol. XV, Nos. 44-6.) The legend on the plate is in old Italian, and may be thus translated :

Zephyr's soft winds her garments gently fill,
And lay her on a plain behind the hill ;

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There when sweet sleep had soothed each weary limb,
She rose and sought a bubbling fountain's brim.
And as she gazed she heard in sweetest tone,
"All this is thine ; come, then, and take thine own."

Another plaque about the same size represents Venus and Cupid. The naked figure of the goddess reclines on the grass upon a blue drapery, touched up with gold ; with one hand she lifts a fold of it, the other rests on a cupid who is caressing her. Her locks are twined with golden thread. The background is of green trees shading off into blue, and in the distance is a town standing on the borders of the sea with a ship. A vase of flowers and a quiver are added as accessories.

This figure, according to tradition, is that of Diana of Poitiers. Indeed, whenever a nude figure is to be found in the decoration of this period, it is usually designated as that of the Duchess of Valentinois. But one may be permitted to doubt the tradition. It does not seem likely that the King's mistress would allow herself to be represented too commonly in this way; and besides, as Count Laborde has pointed out, the portrait is not that of Diana. There is another more curious enamel representing a banquet of the gods, after a print by Marc Antonio, taken from a design by Raphael. Jupiter is represented by Henry II. On his left side is Catharine de Médicis, clothed in a blue robe. But on his right is the nude figure of Venus, with blonde hair, and a sort of head-dress. Round the table are Anne de Montmorency and various other courtiers. Is it to be supposed that Catharine would ever have permitted such a representation, in which Venus should be

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represented by her rival? It seems far more probable that this and other representations of Venus which are often introduced into court scenes were merely idealized figures. It is, of course, possible that these plates and plaques were intended to be used in the house of Diana of Poitiers, and never to come under the eye of Catharine. This plate was in the Fontaine Collection. But all this representation of courtiers under the guise of gods and goddesses, or under the semblance of apostles, is very characteristic of the period.

Leonard Limousin has left an enormous number of works, of which a very interesting catalogue has been made by Messrs. Bouderie and Lachenaud, and published at Paris, 1897. Of his portraits there are eleven of Francis I, fourteen of Catharine de Médicis, ten of Henry II, besides a great number of other important personages. The head of Francis, with its long, straight nose and receding upper lip, is unmistakable, whether represented in his oratory or masquerading as the unbelieving apostle.

Catharine de Médicis is equally striking. A plain face, with a wide mouth, rather salient cheeks and broad forehead. Charles IX considerably resembling his mother, but with some of his father's nose.

Diana of Poitiers, according to her pictures, was by no means very attractive. Her mouth, however, and her small eyes, seem to show wit. Leonard has left us an interesting plaque in the Louvre, representing a gentleman in Roman costume on a white horse, with a lady behind him. Tradition, as usual, represents this pair as Henry II and Diana, but without any reason for the opinion.



FRANCOIS I IN COLOURS. BY LEONARD LIMOUSIN, L.L., 1550, IN THE ORIGINAL

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Some others of Leonard's portraits merit attention. Thus, there is at the South Kensington Museum an interesting portrait of Galiot de Genouillac (sometimes called Tiercelin). He was grand master of artillery. He has one of those portentous noses that appear so often in Leonard's work. In fact, I think some allowance must be made for the size of this organ in the works of this artist. It is almost impossible to believe that all the men of the time had such enormous noses as Leonard is accustomed to give them.

The portraits of Henry II present the family nose, so remarkable in the case of Francis I, but somewhat less accentuated. Of these, one of the best is an equestrian figure in the Louvre, carrying a palm branch.

After the year 1570, by which time Leonard Limousin was probably over seventy years of age, the value of his enamels falls off. He died probably about 1575. In general he signed his works, sometimes in full, sometimes with a double L, and often with the addition of a fleur-de-lis, to denote that he held a Court appointment.

No members of the Limousin family other than Leonard deserve much praise as artists. Martin, his brother, was mediocre. Leonard Limousin is said to have had two sons, both bearing the name of Francis. Neither of them has executed work of any value. One plaque, signed F. L. and dated 1633, is in the Louvre. It is a copy after a work of Virgilius Solis, and represents Neptune. Leonard, a nephew of the famous enameller, is not an artist of importance. There are also two members of the same family named John. Of these, one is

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usually called John I, or Jehan I, who lived in the early part of the sixteenth century. He usually signs with the letters J. L., with a fleur-de-lis put between them. His subjects are usually from the Old Testament, such as Esther, or Bathsheba, or else classical, such as the Rape of Europa. He is little more than a careful workman.

THE NOUAILLIER FAMILY

The Nouaillier family first appear in the sixteenth century. One of the best known is Nicholas, sometimes called Colin, or Couly. Then there appear to be also a Martin, a Peter, a John, and a James.

It is really hardly worth while, from an artistic point of view, to try and establish the relationship between these artists. It can only be a matter of guess-work, depending on entries in baptismal registers or in old municipal documents of the town of Limoges. The work of these men marks a clear decline in the art. They made boxes and jugs of poor workmanship.

THE REYMOND FAMILY

Pierre Raymond flourished during the middle and latter part of the sixteenth century. He was a man of undoubted talent, and his best and genuine work is not only accurate in design and execution, but also very artistic. He executed many orders for Germany, and his first style was chiefly formed on copies of the works of Dürer, and other German artists. A large portion of his work to this day is found in Germany.





ANTONIO, IN GRISAILLE.

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Unfortunately, however, the artist, as he grew older, allowed himself to be absorbed in the manufacturer. Not content with executing beautiful plates and vases, he had them copied again and again, often by very bad workmen. He allowed his signature to go out upon all these copies, so that his initials became rather trade-marks than artist's signatures. It is therefore impossible to know for certain whether any definite piece of work is by his own hand. He executed all sorts of work, plaques, dishes and plates, candlesticks and salt-cellar. He generally preferred a ground of black; upon this he put white grisaille, the flesh of the figures being touched up with red and the general design enriched with gold. About the middle of the sixteenth century his style underwent a change. Italian influence was brought to bear upon him, and thenceforth he adopted the decorative style of the Renaissance, which had been initiated by Raphael. This style became very hackneyed. One gets tired of the squatting sphinxes, the masks, the garlands, and architectural sprigs of arabesque leaves, which are to be found upon most of his work.

On the other hand, the figures, executed in the style of the followers of Giulio Romano, are spirited and well drawn, though the eternal subjects, Cleopatra with her asp, or Hercules strangling a lion, are apt to weary one by constant repetition, especially when done by the wretched copyists whom he allowed to use his cypher. His influence was exceedingly pernicious. To it, perhaps, we owe the fact that the French enameller's art for the second time became ruined by a spirit of commercialism. Pierre Reymond was not an original artist. I believe

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there is no piece of his that is not a copy of some known design.

It is a pity that his table ware is not revived. A set of candlesticks, salt-cellars, and dishes in black enamel with grisaille, would be a very beautiful ornament to a dinner-table—the deep shining black of the ground contrasts admirably with the white cloth.

The most favourite subjects with Reymond are the History of Susannah, allegorical figures representing the months of the year, and subjects from Old Testament history, such as the Judgment of Solomon. He also took classical themes—the combats of Hercules, Venus, Neptune, Diana, and the whole tribe of well-worn deities.

The Reymond family also produced Jean, Joseph François, Martial, and another Pierre, son and grandson of the Pierre already mentioned. A few mediocre works by these men survive.

THE COURTEY FAMILY

The Courteys were probably glass-window painters. Pierre was an imitator, possibly a pupil of Pierre Reymond. He sometimes spells his name Courtois, or Cortoys. This family must not be confused with the Courts, about whom (though a fair number of their works have survived) but little is known.

THE COURT FAMILY

One of the best is Jean Court, named Vigier. He is not to be confused with Jean de Court, who was probably a relation, and inferior as an artist. There is also a Susannah Court, whose works are



CIRCULAR PLATEAU, APPARENTLY BY JEAN COURT DIT VIER
THE DECORATION IN GRISAILLE COMPRISES THE TRIUMPH OF DIANA, A REMARKABLE BORDER OF GROSSEQUE ET
AND THE PORTRAIT AND MONOGRAM OF DIANE DE POITIERS

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much sought after. The design is often good ; but the over-employment of brilliant paillon marks a great want of taste.

There is also an enameller who seems to have lived about the end of the sixteenth century, called Pape. All sorts of conjectures have been made as to his identity. By some he is supposed to be identical with Martin Dicolier. Several rather nice pieces are signed with his name.

THE LAUDIN FAMILY

We now come down to the Laudin family, who, with the descendants of the Nouailliers already mentioned, carried on the art at Limoges during the eighteenth century and consummated its ruin.

It is the lot of most arts to flourish and then to decay. They are invented and brought to perfection by men of genius, and their products are purchased by the few who possess the greatest taste. When their merit has become established, every one wants a specimen, and then a crowd of imitators flood the market with cheap substitutes. After a short time the article thus vilified and burlesqued goes out of fashion, and the art decays.

As it dies, artificial means of reviving it are adopted—the colours become more harsh and violent ; a cheap tinsel effect is introduced ; until finally those objects, which once were the pride of salons, become utterly common and degraded.

The beautiful and natural French renaissance came to an end during the reign of Louis XIV. The effect of the influence of this monarch upon art has been so admirably described by Claudius

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Popelin that it would be an injustice to him not to let it be described in his own words:—

“This lovely girl” (i.e. the renaissance), “who carried all the elegances and graces in the folds of her tresses, fine, slim, light and strong, full of life, good sense and wit, rich in all refinements, going proud and bright through a land of charming symbols, whose thousand blond tresses floated freely to the winds of her pretty caprices, this second harvest of antiquity gathered in regions where fancy freely played, this new creation of masters, filled with eternal spring, behold her now pranked up with all the airs of a romantic prude. We have no longer the adventurous Diana, the slender huntress shod with the buskin and quiver on back—no, it is ‘Belisa’ or the ‘Camargo.’ No more the frank easy gait, the pride of noble refinement, but a pretty show of wit, and a well-turned bosom, with a little place at Court and a pension from the privy purse. No longer that simple innocence to which all things are pure, but a turn for the roguish puerility of corrupt old age. Sham love—sham shepherd-life—tucked up petticoats take the place of the nude. The pure line, with its well-calculated bends, its measured combinations, shrivels up into the twirls of the rococo. The very human body does not escape the passion for flabby contortions. Nothing escapes the universal splitting and snipping. And all this, patronised, inspired, and directed by an aristocracy polite and delicate, but very futile, which, deprived of its rightful heritage of noble deeds, had forgotten the practice of them, and in consequence could no longer have a feeling for noble things.

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"If one must honour the Mécénas who encourage budding genius—(which without too great a paradox one might well refuse to do)—then one is bound to throw on them the onus of the degeneration of Art. For my part I do not reproach them with it, for I am of those who do not believe that the smiles of Louis XIV gave birth to Corneille. Leo X did not make Michael Angelo, nor Raphael, nor Bramante, and when he put Machiavel to the torture he could hardly be said to do it in right of paternity. We do not attribute Titian, Tintoret, or Giorgione to some doge or other. . . . I think that great schools which have slowly and surely developed by teaching and by tradition owe their growth to a thousand circumstances independent of the forethought as of the will of kings. I argue that they have in general rather been led astray than assisted by governments, from the day when rulers, thinking to honour themselves by protecting the fine arts, have presumed to direct them.

"Attempt the liberty of an art, and you corrupt it. All men cannot, like the divine Sanzio, snub a critical cardinal, or, like haughty Buonarroti, throw marble dust in the eyes of a pope.

"A free field was one of the great advantages of mediæval architecture. The bitter satires on the clergy that you may see in the cathedral porches prove it. All the arts participated in the independence, traces of which remain up to the time of Louis XIV. But the great leveller planed all things flat. The same will that decided wars and treaties, left no one leave to add or subtract a bit of lace from the dress of a cavalry officer, and for want of something else to level, took to regulating the

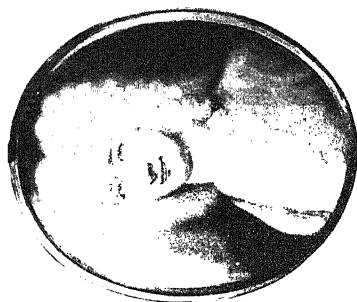
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entablatures and archivolts of masonry. The king corrected with his own hands the plans of his architects, the drawings of his tapestry-weavers, the designs of his decorators. This tendency to hold art in a leash, and to make artists the very obedient servants of those who employed them, has passed into circulation, and now forms part of the rights over artists assumed by the public. The lords did like the sovereign, the commercial classes like the lords. There is danger for Pericles when Critias parodies him, and when Leander mounts his plumes, Mascarille sports a feather.

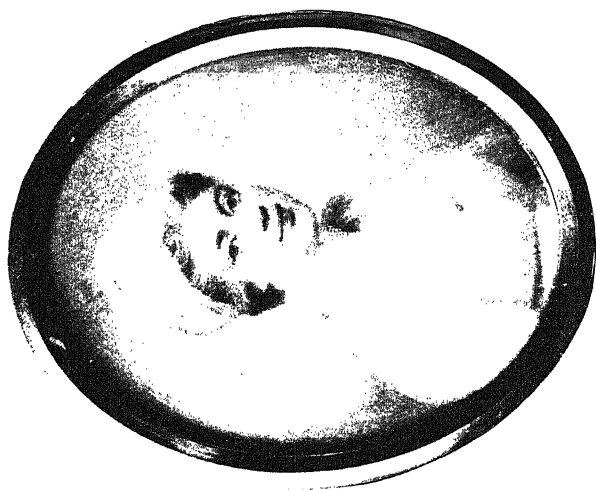
"Ah! Francis I's big nose had a keener scent—he left to artists to decide upon matters relating to their art, and out of this there rose the College of France, the Chair of Bourges, the printing house of Clos-Bruneau, the splendours of the renaissance and of Chambord—'Let experts act' is the secret of success. The instinct of good sense, if not of self-preservation, should prevent the passengers from seizing the tiller-handle."

The above passage very fairly explains the effect of Court patronage upon the arts, and shows that the same repressive policy which in the sphere of government ended in the *ancien régime* and the Revolution, also gradually stifled the glorious traditions of France and degraded an art which had produced Amboise Castle down to the level of drawing-room upholstery.

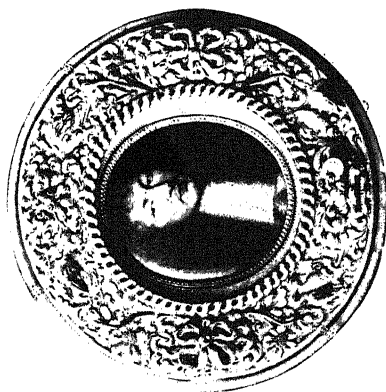
We have in consequence seen that during the seventeenth and eighteenth centuries the art of enamel slowly declined, until it was only used for the making of snuff-boxes and coat-buttons.



LOUIS XIV
JEAN PETITOT



DUCHESSE DE BERRI
CHARLES BOIT



JOSEPH ADDISON
CHRISTIAN ZINCKE



QUEEN CHARLOTTE
H. PONE, R.A.

CHAPTER VIII

MINIATURE ENAMEL PAINTING

IT now becomes necessary to consider a branch of enamelling which apparently sprang up about the close of the sixteenth century, namely, the execution of miniatures upon enamel plates. In this case the metal was usually gold, covered with a layer of white enamel, upon which delicate work was stippled in various colours and fired.

It is to the jewellers' art that this branch of enamelling must be traced. M. de Laborde, in his valuable Catalogue of the Louvre Enamels, says as follows :—

“The great art of painting in Enamel of Limoges kept its ancient procedure and continued to be successful. But at the same time, the Art of Jewellery all over France, I might say all over Europe, strove with it, and produced those white Enamelled gold ornaments of which a small number have come down to us, but which inventories and old bills complacently set forth in innumerable quantity. One gets tired of everything; white enamelled jewellery got out of fashion. It became necessary to tint it, but this method produced solidity by heavy coats of enamel.

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"The jewellers therefore sought to colour their delicate works with the thinnest layers possible. Going back to the proportions designed by Leonard Limousin, they mixed metallic oxides with a reduced proportion of glass, and, with more delicate gradations of shades, with thin layers put on the surface and well burned in, they executed ornaments of the greatest lightness.

"But while jewellery was thus developing the art of painting on enamel, Limoges each day allowed its great painted enamels to fall lower and lower in artistic merit.

"Absence of taste, absence of talent, nullity of invention, production of mere rubbish in deplorable quantity, everything tended to disgust the public with these enamels, while, on the other hand, it became evident that jewellers' enamels only needed a man of talent in order to develop and become productive. Toutin, a jeweller of Chateaudun, was this man. In place of simple ornaments, he painted, or caused to be painted in enamel, portraits in miniature; and into the breach thus made in Limoges enamel work, there rushed a crowd of painters of talent."

So great is the number of these men that Laborde estimates the number of French miniature painters in enamel up to the middle of last century at five or six hundred. But, of course, only a few of these did work worth preserving. The chief seats of the art appear to have been Paris, Geneva, and, later, London and Dresden.

By common consent, Jean Petitot is considered the best of these, and, therefore, some account of him and his work is desirable.

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John Petitot was born at Geneva, 1607. His grandfather, being a Protestant, fled from France to escape persecution, and his father, who had practised at Rome with success as an architect, was forced to leave Italy and establish himself at Geneva. In company with his master, Peter Bordier, Petitot made a tour through Italy, France, and England in search of new processes of enamelling. In France they were instructed by the Toutins, father and sons, who at Blois had commenced the system of painting on enamelled plaques with colours, in miniature fashion.

In England, the work of Petitot so pleased Charles I that he desired to see the artist. The King, who was a true patron of art, helped Petitot by personal advice, introduced him to Van Dyck, and directed Turquet de Mayerne, the famous chemist and physician, to help him. The effect of royal patronage was speedily seen. Fresh colours were discovered, and Petitot, under the able guidance of Van Dyck, speedily developed a beautiful style of miniature painting.

After the execution of the King, Petitot fled to France, but Bordier remained in London, where he finished by the orders of the Parliamentarians two pictures on gold, representing the Parliament sitting and the Battle of Naseby. These were intended to be presented to Cromwell. These enamels are highly praised by Horace Walpole in his anecdotes of painting.

Jacques Bordier, a relation of Peter, also practised enamelling under the instructions of Petitot, and, having fled to the Continent, was at one time in danger of the Inquisition. Finally, however,

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Petitot and Jacques Bordier married two sisters, daughters of a king's counsellor at Bordeaux. They remained friends and fellow-workmen all their lives. Petitot painted the faces and flesh; Bordier the hair and draperies. They were patronized by Louis XIV, and executed portraits after Mignard, Lebrun, Champaigne, and others. Sometimes they did original portraits. Richelet thus describes their art in his French Dictionary:—

“Painting on enamel is an art which imitates with enamel colours the most beautiful subjects. It is done on plates of gold or copper, enamelled with white by jewellers, who undertake this work. On these plaques they paint with brushes and with various colours which imitate agreeably the tints of nature. The colours of the enamel-painter are shell-black, blue, grey, red, gold-purple; glass painter's purple, etc. But it is needful to give to the enamels which one employs a proper fire in order to make them spread on the plate and take a proper glaze. For this purpose the work has to be fired seven or eight times. Enamel paintings are not subject to change, and time, which changes so many things, has no effect upon them, for it is a sort of vitrification. Those honest folk who wish to know more on this subject need only consult Messrs. Bordier and Petitot, celebrated in enamel painting. These gentlemen instructed me with the greatest frankness.”

In his time, Petitot's most admired portraits were one of Mazarin, after a picture by Philippe de Champaigne, which was said to surpass the original, and one of Hugh de Lyonne.

In the South Kensington Museum there is an

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enamel of Mazarin by Petitot, and also a particularly fine one of Richelieu, which surpasses the portrait of Mazarin.

There is a legend that Petitot and Bordier made large fortunes. It appears, however, that this is certainly a mistake. In a curious book of meditations which he wrote for his children, he remarks on the mediocrity of his fortune. The book is still in existence, and entries of births and deaths have been continued in it down to the middle of the last century.

The last days of Petitot were saddened by the senseless religious persecutions which a miserable courtesan imposed on the fading will of Louis XIV. In 1685 the Edict of Nantes, by which Protestants were allowed to reside in France, was revoked. Petitot desired to return to Geneva. He repeatedly applied for permission to leave France. His applications resulted in an order of imprisonment, and the aged painter, who had done so much for the art of France and of Europe, was shut up in the Prison of Fort l'Évêque, where Bossuet vainly employed his eloquence in an attempt to convert him.

That which the eloquence of Bossuet failed to bring about, the threat of torture and the galleys effected, and the zealous priesthood had the satisfaction of wringing an abjuration from the octogenarian artist. Full of remorse for this action, Petitot fled to Geneva. Arrived there, the Council discussed the question whether he ought to be prosecuted for his cowardice in abjuring the Protestant faith. On the plea, however, that he had not attended Mass they forgave his weakness and

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contented themselves with a voluntary reparation to the Church in expiation of his fault.

He retired to Vevay, on the Lake of Geneva, where he died in 1691, aged 84. His lifelong friend James Bordier had died at Paris in 1663.

The principal collections of the works of Petitot are at the Louvre, where there are 94 specimens; Windsor Castle, where there are 250 portraits, comprising his very finest works; and South Kensington Museum, in London, which possesses nearly 60.

Those in the Louvre are the subject of a most interesting and excellent work on Petitot (Paris, 1862), containing a collection of exquisite engravings. As the portraits at South Kensington are the most accessible to the British public, I have chosen from among them a few that seem deserving of attention.

The characteristic of these enamels is a warm bluish background, and a full, rich colouring of face and hair.

Petitot was fond of introducing a piece of red, and a bow tied round the neck is a common way of doing it. The red is a somewhat dull sealing-wax colour, and is very valuable to carry off the somewhat full colours of the face. The flesh tints are rather beefy and deficient in greys. The flesh-tint of the women is paler, and also deficient in cool tones, but the rounding and modelling of white necks and shoulders is very skilful.

Among the portraits, four of Louis XIV claim attention. Two represent him as a young man (246, 275), one is middle-aged, strongly painted in full colour with a dark grey background (309), and the fourth is in armour (273). The following



CHARLES DE GUISE, CARDINAL OF LORRAINE
AT SOUTH KENSINGTON MUSEUM

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appear worthy of attention : (277) Prince de Condé, (269) Comtesse de Grignau, (268) Henri de la Tour d'Auvergne, (267) François Henri de Montmorenci, (278) André le Notre, (311) Armand de la Mellerage, (320) Duc de Guise, (256) Philippe, duc de Vendôme, (241) Anne Marie Louise D'Orleans, (293) Duc de Berri, (258) Duchesse de la Vallière, the ill-fated mistress of Louis XIV, and (255) Christina, Queen of Sweden.

As I have said, after the death of Petitot the art of enamelling became common, and the mode of executing these enamels was no longer a mystery. In 1721, James Ferraud published his "Art du Feu, ou de Peindre en Émail." This excellent little treatise errs perhaps on the side of undue complication. The author does not seem to have realized that, as in painting, so in enamel, the simplest mixtures and modes of work are the best, and overloads his work with masses of recipes, showing that he laid stress rather on methods than on principles.

But his methods are excellent, and could only have been described by one who had practised them.

There is no need now, I think, to have recourse to these ancient books.

Instead of making the necessary fondants, good scraps of optical glass can be got, which far surpass the crude specimen prepared on a small scale in quality and homogeneity, and which leave nothing to be desired. Instead of procuring and painfully grinding up more or less impure materials, we can now buy oxides of the metals in a state of most exquisite purity, most of which, I am sorry to say, are "made in Germany." Instead of burning plants

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to get a nondescript ash, called "alkali," and consisting of potash and soda in unknown proportions, we can now have excellent pure salts of potash and soda in any quantity we want, and instead of searching the seashore for white sand, free from discolouring traces of iron, we can now manufacture silicic acid of dazzling whiteness and purity.

Of course the shopkeeper comes in, and tries to mystify the artist, with his aureolins, and cærulians, and new magical names for old products; but let the jeweller-artist avoid all unknown materials.

If our oil-painters would realize that there are really only about eight to ten pure durable pigments in existence, and that all painting mediums are only made of linseed oil, turpentine, copal, and amber, the impermanent messes with which so many pictures are painted would be avoided, and such horrible and fatal pigments as "mummy," and ochre earths brightened with fugitive aniline dyes, would no longer be used.

Fortunately for the enameller, his colours do not fade. Anything that will stand the furnace will stand sunlight and the test of time, but enamels of different makes, mixed rashly together, are fatal. All good work ought to consist of soft, or lead glass, of one uniform composition, tinted with metallic oxides; and borax ought to be avoided like poison.

One of the earliest miniature enamellers in England was Charles Boit, a Frenchman born in Stockholm. He was trained as a jeweller, and attempted to earn a living in London. He was unsuccessful, and therefore went into the country to teach drawing. He engaged one of his scholars, a gentleman's daughter, to marry him; but the affair

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being discovered, he was thrown into prison. While in prison he studied enamelling. Walpole says that he obtained considerable sums for his work. For a lady's head he got £60. Walpole also says that he was engaged to paint a large plate of Queen Anne, Prince George, the principal officers and ladies of the Court, and "Victory," introducing the Duke of Marlborough and Prince Eugene. France and Bavaria were prostrate on the ground, with standards, arms, and trophies. The size was to be about 24 × 18 inches. And Laguerre painted the subject in oil. Prince George procured for the artist an advance of £1000, and he then erected a furnace, and built rooms to work in. He made several essays before he could even lay the enamelled ground, "the heat necessary being so intense that it must calcine as much in a few hours as furnaces in glass-houses do in twenty-four hours." In these attempts he wasted seven or eight hundred pounds. This failure shows what an impostor he must have been. The painted-glass workers used furnaces that would have amply sufficed.

In the meantime the Prince died. This put a stop to the work. Boit, however, began to lay colours on the plate, and demanded and obtained £700 more. This made considerable noise, during which happened a change of favourites at Court, extending even to Boit's work. What is here alluded to is, of course, the quarrel between the Queen and the Duchess of Marlborough, who was succeeded in favour by Lady Masham. The Queen then ordered the figures of "Peace" and the Duke of Ormond, the enemy of the Duke of Marlborough, to be substituted for those of "Victory" and the Duke of Marlborough. The

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alterations were sketched in; but Prince Eugene refused to sit, and the Queen died. Boit's goods were seized in execution, and he fled to France. Like most of the best workmen in those days, he was a Protestant. He, however, made no difficulty about abjuration, and obtained a pension of £250 and a lodging. He died in 1726.

Christian Zincke, the son of a goldsmith of Dresden, was a pupil of Boit. He obtained no less than thirty guineas for a portrait. He was appointed cabinet painter to the Prince of Wales. In 1746 his eyes failed, and he retired to Lambeth. He died in 1767.

Gervase Spencer was originally a gentleman's servant, who, having shown a talent for drawing, was encouraged to try miniatures. He exhibited several portraits in enamel, in 1762, at the Society of Artists, but died in 1763.

Nathaniel Hone was born at Dublin in 1718. He was the son of a merchant, but taught himself drawing. At York he married a lady with some money. He then came to London and settled in St. James's Place. Some of his pictures gave displeasure to the Academicians, being considered as attacks on Sir Joshua Reynolds and Angelica Kauffmann. He died in 1784. His grandson, Horace Hone, also painted miniatures in enamels.

Henry Bone was the son of a carver in wood and cabinet-maker, born in Truro, 1755. At the age of twelve he is believed to have gone to Plymouth, where he painted birds on china for Cookworthy. When the factory was removed to Bristol, he accompanied it, and in 1772 was apprenticed to Richard Champion. But Champion failed in 1778.



SARAH, DUCHESS OF MARLBOROUGH
H. P. BONE, JR. AT SOUTH KENSINGTON MUSEUM

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Thereupon Bone went to London, and earned a living by painting miniatures. He married Elizabeth Van der Meullen. He soon after commenced painting on enamel, and in 1781 he exhibited a portrait of his wife. His chief work was miniature enamel till 1789, when he executed a Muse and Cupid. In 1794 he did a "Sleeping Girl," after Reynolds, and in 1798 George IV bought his portrait of Lord Eglinton. He was made an Associate of the Royal Academy in 1801, and appointed painter in enamel to George III. After this he executed many enamels after celebrated pictures.

In 1811 he was made an Academician and executed an enamel after Titian's "Bacchus and Ariadne." This enamel measured 18 by 16 inches, and is the largest of its kind that has been ever done. It was bought by Mr. Bowles, of Wanstead. In 1822 he commenced a national portrait series, commencing from the time of Queen Elizabeth, and executed fifty-four of them. His eldest son, Henry Pierce Bone, also adopted the profession of an enameller, but his works are very distinguishable from those of his father. At the death of Henry Bone his large collection of enamels was dispersed by public auction, only fetching the sum of about £2000. He executed about five hundred enamels. Most of these are now scattered about in private collections. There are a few fine ones in the Wallace Museum in London. Henry Pierce Bone, the son of Henry Bone, also executed a large number of enamels. A fine example of his work is a copy of a portrait of Sarah, Duchess of Marlborough, at South Kensington; and William Bone, his son, painted a few.

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The enamels of the Bone family always have a description of them painted in indelible enamel on the back, so that it is not difficult to identify them. They are brilliant, and yet in good taste.

They fail, perhaps, to reach the highest point in art, because they are done in a style that imitates oil painting, and they hardly attain the delicacy of gradation of oil. But they have a softness and brilliancy peculiar to enamel, and are practically imperishable, so that the copies of celebrated pictures by Bone will long outlive the originals.

At the Wallace Collection, the most noticeable of Bone's enamels is "Lady Cockburn and her Children," after the famous picture by Reynolds. The children are partly naked, hanging about the mother. "Collina" (Lady Gertrude Kirkpatrick) and "Sylvia" (Lady Anne Kirkpatrick) are both after Sir Joshua. The picture of Lady Hamilton as "Ariadne," after Madame Lebrun, was bought by Lord Hertford in 1859 for £700.

William Essex was living in Clerkenwell in 1818, when he exhibited his first enamel, "A Dog's Head." In 1824 he exhibited a portrait of the Empress Josephine, after Isabey, and the next year some groups of flowers. In 1839 he was appointed enamel painter to the Queen, in succession to Henry Bone, who had died a few years previously. He died in 1869. His son, W. B. Essex, succeeded him as an artist, but with greatly inferior ability.

At the South Kensington Museum there is a small but good collection of his works. One of the largest and most striking is of Lord Byron, after Phillips. The work is bold and clear, though somewhat hard. A portrait of Garrick, after Gains-



DAVID GARRICK

W. ESSEX. AT SOUTH KENSINGTON MUSEUM

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borough, is also good. Perhaps the best of Essex's work are his flower pieces, of which there are two excellent examples, apparently after Dutch masters. A group of peasants, after Wouwerman, is also very well copied. The "Cottage Toilet," after Wilkie, is good in colour, but somewhat tame. There are also several portraits of inferior merit.

In Germany a revival of painted enamels was inaugurated at Munich by Louis of Bavaria. Among about twenty artists, the best known are Wustlich, Deininger, Langhamer, and Meinelt. Their work has no originality, and only consists of faithful copying.

CHAPTER IX

PAYSAGISTS ON SNUFF-BOXES AND FANCY WARE

FOR delicacy of work in ornamental enamelling, no nation has ever equalled, nor probably will equal again, the French work of the latter half of the eighteenth century. Thousands of the most exquisite snuff-boxes attest the taste and skill of the French jewellers. The French Revolution entirely destroyed this art and drove the artizans to other countries, and the jewellery work of the revolutionary period is rough and common. When the revival took place under the Empire, decorative art rather took the direction of clock making and furniture. Snuff went out of fashion. Probably, therefore, such beautiful things as these boxes will never be made again.

To describe or endeavour to classify the various sorts of boxes that exist in profusion in museums and private collections would be out of the question, except in a work specially devoted to them. As, therefore, I must make a selection, I prefer to describe a few specimens in the Jones Bequest, now in the South Kensington Museum, which are very good examples of the various branches of the art. In these one cannot help admiring, first of all, the

SNUFF-BOXES AND FANCY WARE

excellent workmanship. The hinges and lids are the most perfect fit, and are smoothed and polished to perfection. The repoussé work is sharp and perfect; the enamel in almost every case is flawless. The colours are very brilliant, and are obviously the same as those used by china painters.

No. 514 is a gold snuff-box, with scenes painted in miniature after Greuze. The colours are rich. There are a fine rose, orange, yellow, blue, several browns, and a dark green. The subject is the favourite one of "*La cruche cassée*." The painting is so fine that for most eyes it is necessary to use a magnifying glass.

No. 542 is a very similar box, but this time the subjects have been taken from Dutch genre pictures.

No. 540 is a gold box, with one of the characteristic silly pastoral scenes of which the most unpastoral ladies and gentlemen of the *ancien régime* were so fond. There is a Phyllis, highly dressed in satins, sitting on a bank, with a Corydon making love to her. This example is in particularly mawkish taste, quite "sweet," and irresistibly calls to one's mind such little songs as the well known "*Ah, s'il est dans votre village, un berger sensible et charmant*," which Marie Antoinette set to the words of Florian, for some of those theatricals which had so great a part in bringing about the loss of her crown and life.

No. 510 is an oval snuff-box, with military scenes, in a style rather reminding one of Rubens' pictures, but infinitely more tame and flat. Then there is a patch box with a white ground and pink sky, and on it, finely miniatures in grey, groups of those

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little cupids that one sees in the engraved book illustrations of the period.

No. 505. Pygmalion in a most affected attitude at the feet of a Galatea of white marble, or rather white biscuit china, which a cupid is, by his embraces, warming into life. No. 501 is decorated with groups of children in sepia, with a sky of blue. In those days they were very fond of cupids. You had them forging out hearts on anvils, pricking them with arrows, selling them in baskets, hovering with flattering whispers round exquisite young ladies at their toilettes. We should laugh nowadays if a gentleman brought out a memorandum-book with cupids on it. Perhaps the valentines of the middle of the last century put an end to the style. No. 496 is a snuff-box, with scenes of rustic courtship. Here an attempt is made to represent real peasants, so that we know we must be in a period subsequent to the publication of Rousseau's works. It is dated 1770, and signed "Manière bijoutier du Roi." No. 494 is a snuff-box, with paintings in rose colour on a white ground. They are in the Boucher style. The inspiration is a renaissance revival of classicism, but the models have been selected from young French girls of the period. It is as though some classic Venus began posing at a glass and screwed up her mouth to say "prunes and prisms." All these bewitching ladies have maids, equally fascinating, to wait on them—an attendant in such pieces is as indispensable as a confidante to the heroine in a tragedy.

From this work an odour exhales of ambergris and patchouli. One seems to see the silk coats and powdered wigs of the frivolous beaux who could

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die with a jest on their lips; who were taught to bear success and misfortune with equal equanimity; to whom every woman was fair game, and who used these pretty boxes in order to suggest tender themes of conversation.

The workmanship was good, the subjects well drawn, the colours bright and generally well modulated. Throughout the whole there was an excellent spirit of proportion and decoration. They remind one of the best French architecture; their makers seem instinctively to have known how big to make the oval picture in the lid in proportion to its frame, and what amount of detail to put in the borders. It cannot be called great art, because great art must be great in purpose as well as in execution, but for the purpose of making pretty presents to gay young ladies they are unsurpassable.

In Vienna, work was done during the same period that is almost indistinguishable from that of France. Two boxes, numbered 498 and 492 in the South Kensington Museum, are signed "Schindler, Wienn." One is adorned with domestic scenes, the other is a representation of Venus and Adonis in green, with a most ill-assorted pink ground. The drawing is French. But no Frenchman would ever have ventured on such a combination of colours.

A cup and saucer, dated 1760, in the Sèvres style, signed "les Frères Huaut pin," is in the same case, and is worth attention.

At Dresden, and also in Switzerland, a very large amount of enamelling on small ornamental articles has been done, and the traditions and practice have gone on to the present day. Watch cases have thus been enamelled, but the rough

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usage which a watch is apt to receive renders this sort of decoration very liable to destruction.

It is not my intention to describe at length the enamels which were executed in great quantity at York House, Battersea.

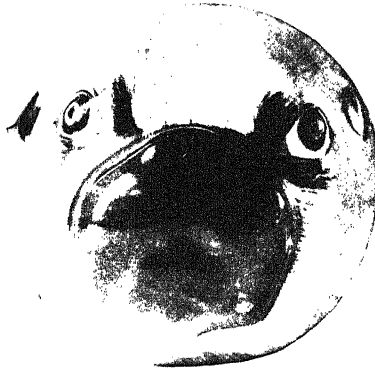
It was founded about 1750 by Stephen Janssen, who afterwards, on the death of his brother, succeeded to a baronetcy. An enormous number of the most varied articles was turned out here. All were pretty, but hardly one possessed real artistic merit. They chiefly consisted of snuff-boxes, wine labels, candlesticks, patch-boxes, and buttons. Many of them were ornamented by the process of printing, which had been applied to porcelain and glazed ware by Dr. Wall. In 1755 Horace Walpole wrote to Richard Bentley, sending him a Battersea enamel snuff-box which, he says, was "done with copper plates." Their works are usually executed on a soft white ground laid on copper. The glaze is high, and the material evidently contains a large proportion of lead.

A peculiar pink colour is specially characteristic of Battersea enamel. Certain collectors fondly imagine that it cannot be reproduced. It is, however, easy to imitate by glazing over white with an enamel made with gold.

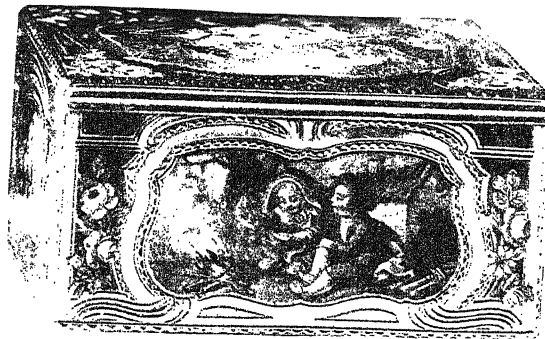
There is a factory now in Paris in which Battersea enamels are so perfectly imitated, broken chips and all, that it is impossible to distinguish them from the originals.

The somewhat slovenly and rapid painting, the colours, and the slender and refined shapes are copied to perfection.

The practice of this and other firms engaged in



A DOG'S HEAD (BATTERSEA ENAMEL)



FRENCH SNUFF-BOX
AT SOUTH KENSINGTON MUSEUM

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similar work is to buy an original, imitate it a certain number of times, and then re-sell it. The retail dealers then chip the copies and dirty them according to taste.

So many examples of this work exist that it would be superfluous and impossible to select for description specimens in private collections.

It happens, however, that there is a representative assemblage of Battersea enamels in the magnificent ceramic Schreiber Collection at South Kensington.

From a consideration of these enamels we may divide the art into several groups. The main inspiration is undoubtedly French. The snuff-boxes, bonbonnières, and étuis are attempts in copper and enamel to present something that should resemble the beautiful gold enamelled snuff-boxes of the Regency.

Three sorts of artistic work are to be noticed in them. First, there are the china painters, whose work is characterized by brilliant colour, not always very well harmonized, the inspiration of which has been derived from Sèvres and Dresden. Then there are a number of prints in black or in sepia from copper plates. Lastly we may see the influence of those artists who were in the habit of colouring engravings, an art very prevalent during the latter part of the eighteenth century.

The snuff-boxes and toilette boxes are in copper, with pink and blue ground laid upon a foundation of white. They are enriched with raised gold scrolls and leaves. They are obviously an attempt to make cheaply boxes that should represent in a feeble way the French work.

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The execution is bad, the knowledge inferior to the French, and yet somehow, in spite of rude drawing and bad colour, one feels in presence of a better art than the French—more original, and more independent. No. 1505 is a toilette box after Watteau. This is a very characteristic piece. The foreground and outlines are in a sort of purple opaque brown, which produces a heavy effect. No. 1522 is a snuff-box with scenes from Lancret's "Le Matin." One has only to compare this box with the print from which it was taken, in order to see what a poor copy the painter has made. It is, however, not slavish. The enamel painter has copied freely, and has evidently been thinking of the objects themselves, not only of the print. Thus he has introduced changes into the design and the drawing. The style is taken from Paris and Dresden. Nos. 1506, 1507, and 1606 are obviously by a man trained entirely as a china painter. So also are the toilet boxes, Nos. 1502 and 1511.

In imitation of the bonbonnières made in Dresden in the shape of animals, the Battersea artists also made copper-gilt and enamelled boxes in the shape of animals. Thus we have dogs' heads (1620), and a pug's head with staring eyes; also a boar's head, a parrot, a woodcock, and many others.

There is a large collection of étuis; these are generally ornamented with love scenes, such as Venus mourning over an urn for Adonis (1672). Then there are also nutmeg-graters, and curious mustard boxes with a hole in the cover for the spoon-handle to project through (1796). One of these is designed into a fine military trophy (1795). There are a number of candlesticks in pale colours,



TOILETTE BOX (BATTERSEA ENAMEL)
AFTER WATTEAU. AT SOUTH KENSINGTON MUSEUM

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with small landscapes on a white ground. No. 1761 is a particularly fine pair. There are also a large number of small taper candlesticks.

In the Jones Bequest (442 and 894) there are several sets of silver candlesticks, enamelled in the ground with a turquoise blue, which may have been done at Battersea.

There are also heads of canes (1750), and salt-cellars of a flat or squat shape with legs. Salt would have been unwholesome in a highly-leaded glaze, so these salt-cellars were provided with glass linings.

There is an interesting collection of plaques. Some of these are obviously by china painters, as, for example, No. 1475, which represents Chinese boys at play. Nos. 63, 64, 65, 68, and 1467 are plaques of pastoral scenes. The drawing is bad and the colour execrable; and yet, in spite of these defects, the pure brilliance of the pigments and surface affords an inexplicable pleasure of a rather low artistic order. No. 1495 is a set of small locketts with women's heads, copied from fashion plates of head-dresses. No. 1478 is a landscape piece, with large use of opaque heavy chocolate-brown. The foreground is yellow, the hills in the middle distance are pink, and the sky blue. It is hardly possible to imagine more hideous colouring. But by far the best set of plaques in the collections—indeed, the only ones that can pretend to any really good execution—is (1447) a set of seven plates with rose Pompadour borders, with admirably painted scenes in the Watteau style. From the character of the colour and drawing, I should say that they were the work of a Frenchman.

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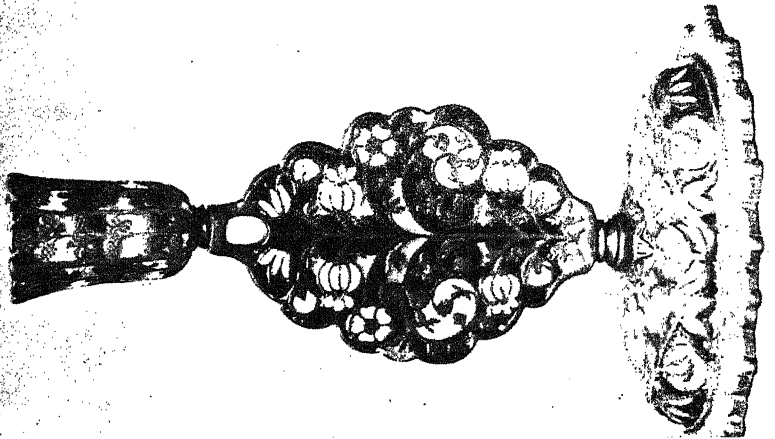
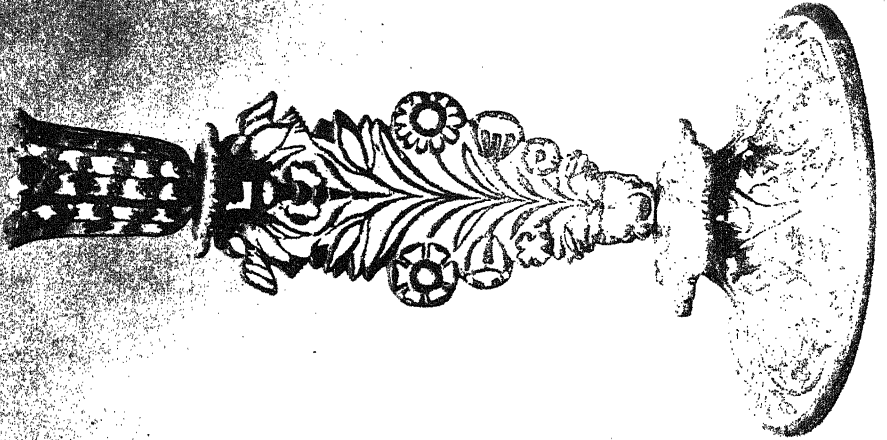
A great number of Battersea enamels were ornamented with copper-plate engravings. The subjects were mostly French. The method was to print the engraving on transfer paper, and then transfer it on to the enamel. This, of course, resulted in a reversed impression. No. 1446 is a subject after Boucher. There are, however, some English prints, such as the portraits of the Miss Gunnings, of George II, of Sir Robert Walpole, Horace Walpole, and the Duke of Cumberland.

Then there are numbers of pastoral scenes similar to those which were commonly in use in fire tiles, and were largely turned out in Liverpool.

Sometimes the prints were coloured. Thus, for instance, No. 1438 is of "Danaë and the Shower of Gold"; No. 1431, "Venus and Vulcan"; No. 1430, "Venus and Attendants." It is impossible to imagine anything more appalling than the colouring of these prints. It displays a complete insensibility to harmony.

On the whole, the art of the Battersea enamellers must be considered as a rather poor imitation of continental work. It is rare to find any original designs or subjects, and though in the execution some freedom is shown, yet the colour is seldom well arranged, and the ornamental design poor. These works are interesting from their association and bright and fresh look, but any great merit cannot be assigned to them.

In this connexion it is desirable to deal briefly with a style of English work of which many specimens exist, but of which not much appears to be known. I allude to Champlevé candlesticks of brass,



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roughly enamelled with opaque colours. As a rule, the interstices are not cut out, but are simply cast. The design is mediæval in inspiration, as is easily seen from the example reproduced here.

The nozzle is tulip-formed, striped vertically in turquoise and white chequered with brass. The stem is flattened, with an irregular serrated outline formed by a series of flowers springing symmetrically from a vertical stem, and enamelled in white on a turquoise ground. The foot is a singular scroll pattern of leaves and fruit of the vine, with dogs and hares coursing through and enamelled to match the stem. It is the property of Mr. William Mitchell. It is believed to be seventeenth-century work. Such pieces as these could be very easily reproduced in numbers, and as they will stand very hard wear it is a pity that more of the kind are not made.

It would be very suitable for ecclesiastical use, where large objects that can be seen at a distance are desirable, for a considerable change has come over the spirit of ecclesiastical art. In earlier times and in the Middle Ages the desire of the devout was to give something of great value to God. Sometimes this took the meaner form of an endeavour to bargain with God by promising a valuable gift in return for some benefit. In all cases, however, the idea of value was an intrinsic part of the gift. But with later developments of thought it became instinctively perceived that God valued the intention, not the gift, and that gold and jewels were mere dross and stones in the eyes of an Infinite Being.

Hence devotional art took the form of erecting

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buildings, or glass or altars that should be of a memorial character, and be aids to devotion rather than valuable presents. Whence it followed that brass is now substituted for gold and marbles for precious stones, and it would be considered out of place to put jewels in the eyes of a Madonna, or clothe her in a golden robe encrusted with real gems. Chalices are now perhaps the only article of church furniture which are executed in gold and with precious stones.

CHAPTER X

ENAMELLED JEWELLERY

IN endeavouring to understand the origin and progress of the art of jewellery, one must not forget that almost all ornaments were originally used either as charms or lucky emblems, or else as a mark of tribal distinction. By the ancients various occult virtues were ascribed to stones. Thus, according to Pliny, the diamond neutralizes poison, dispels delirium, and banishes groundless perturbations of mind. The emeralds in the eyes of the statue of King Hermias at Cyprus were so brilliant, that the rays from them penetrated the sea and alarmed the tunny fish and put them to flight. Even the great philosopher, Boyle, believed that amulets might give off effluvia possessing healing powers; and really since the discovery of radium it seems possible that minerals may have virtues in them that have in later times been unjustly ridiculed.

Talismans or inscriptions are very ancient. Thus Seremis Samonicus, a physician who was murdered to satisfy some freak of Caracalla, transmitted the famous

A B R A C A D A B R A
A B R A C A D A B R
A B R A C A D A B
A B R A C A D A
A B R A C A D
A B R A C A
A B R A C
A B R A
A B R
A B
A

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which, inscribed on some material and worn about the person, was supposed to cure ague. The jewels in the breastplate of the Jewish High Priest typified the twelve tribes of Israel. Even in our days, in Italy, a small piece of coral is worn as a preservative against the evil eye.

In Assyria, as also in most of the ancient countries, seals were used, and all their gems and seals were usually set in gold or other precious metals, and no doubt originated the value attached to these articles, as also the practice of wearing them.

I do not propose to describe enamelled jewellery, because the subject more properly belongs to goldsmiths' work, which is being treated in another volume in this series. During the Middle Ages, about the thousandth century, personal jewellery was not being much worn, but it gradually came into vogue in the succeeding centuries.

It was not, however, till the Renaissance that the art was fully developed. France, Italy, and Germany led the movement, and one of the most interesting of the jewellers was Peter Wiriot Wæiriot de Bouzy, who published a work on the subject in 1561. This book, which describes rings, is quite in the Renaissance style. The rings are enamelled, and represent twining serpents, satyrs, female figures, and masks in chiselled gold, ornamented with precious stones. The next century saw a great advance in the art, and the work of that time has never been rivalled for design. At first the enamel used was only white. Later it was painted and coloured enamels, gradually introduced with forms of birds, or dragons, or figures of Venus and other allegorical subjects.

ENAMELLED JEWELLERY

Hat ensigns were also made in fashion, and often consisted of gold repoussé and splendidly enamelled.

During the next century there was a decline. The goldsmiths' art became employed mainly in the setting of jewels. Enamel was largely employed.

The eighteenth century witnessed a still further decline in taste; the work became more mechanical, and the ornament had less meaning. The marquise ring may perhaps be selected as the most characteristic example of the use of enamel at that period.

At the French Revolution most of the old jewellery was melted up, and succeeded by very poor and barbarous work, and it was not till the Empire that the desire for good jewellery revived. Enamel was then largely used for decorating the backs of watches, and the faces of watches began to be almost invariably made of opaque white enamel. During that century the ornamentation of watches declined until it almost ceased, and most watches have now no pretence to be anything but instruments of precision enclosed in perfectly plain cases.

The characteristic feature of modern French jewellery is that stress is laid on the design of the work, rather than on the value of the materials of which it is made. Formerly, settings had been only arranged with a view to show off some valuable jewel; now the setting is usually the more valuable of the two. The principal artists who have led this movement are Lalique, Foy, Fouquet, Vever, and Mucha, the Slav artist.

Of these, Lalique was the first in order of time. He has a beautiful house in the Cours la Reine, and mostly works on private orders. René Foy's studio

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is in the Parc Monceau, while Georges Fouquet has a sale room in the Rue Royale.

The art of these men has much in common. It is recognized when seen, but its characteristics are not very easy to set down in words. Perhaps it may be best described as a grafting of barbaric art upon the French Renaissance stem. It loves dragons and dragon-flies and serpents, and lean, ugly, passion-worn women of the Hungarian semi-Oriental type, with clinging garments and their hair in large bands over their ears, which of late have been a good deal vulgarized for electric lighting and elsewhere. The vegetation is as if made out of wire, and the curves of their lines are springy, like a bent riding-whip. The nearest thing one can recollect to them in European art is the jewellery worn by the Byzantine emperors. This style in the hands of the masters above mentioned is very interesting and often pleasing. In the hands of imitators it early passes into pantomime jewellery. It is usually known as "L'Art Nouveau."

CHAPTER XI

MODERN ENAMELS

IT now becomes my duty to give a short account of the progress of enamelling in the nineteenth century, and of the revival of various branches of the art.

The painting of portraits in enamel was never discontinued in France, for Kranz, Soiron, and Augustine executed a number of enamels during the Empire, representing Napoleon, Josephine, and various distinguished generals. Henri Baup and Mademoiselle d'Audebert also did portraits, and the latter also painted subject pictures on enamel, such as "Venus and Ascanius," "Cupid and Psyche," and "Holy Families."

Constantine also painted enamels after various artists of his day, such as Belisarius, and portraits of Murat, Joseph Napoleon, Mademoiselle Mars, and others.

Counis, Duchesne des Argillères, and Fouquet may also be mentioned. All these artists, though many of them were foreigners, lived and worked at Paris in the miniature style of Petitot.

Towards the middle of the century a very important development took place, and a return was made to older processes.

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It is difficult now to say to whom this movement was due, but it seems certainly to have emanated from the group of artists that a Government subvention wisely bestowed had caused to assemble at Sèvres. M. Brogniart, author of the magnificent technical work on china and porcelain, M. Mortelette, who invented the method of enamelling slabs of lava, M. Salvetat, and M. Meyer-Heim, a director of the manufactory, undoubtedly were closely connected with the movement, and it is indirectly from some of these clever craftsmen that the predecessors of the six or seven manufacturers of crude enamel in Paris learned their processes.

The earliest of the artists seem to have been M. Apoil, who unsuccessfully attempted some large enamels on iron plates, and M. Froment, who from time to time did grisaille.

It is, however, alleged that the first artist who really revived the Limousin process was Lepec, whose large work, "The Clemency of Isaurus," was exhibited in 1867, and obtained for him the Cross of the Legion of Honour. The work was bought by an Englishman, and sold in 1892 at Christie's for one-tenth of the sum that had been given for it.

But the artificer who claims to have been most instrumental in reviving the neglected art of enamelling in the Limoges style is M. Alfred Meyer, who asserts that, with the assistance of M. Riocreux, M. Robert, M. Nicalle, and M. Salvetat, he succeeded in rediscovering the ancient methods. A claim has been made by M. Falize, in an article in the "Gazette des Beaux Arts," 1893, that Claudius Popelin was the real reviver of the old methods. M. Meyer, however, distinctly asserts that he

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taught Claudius Popelin, and that for that purpose M. Popelin paid his expenses in transferring his house to Yères in order to be near the château of M. Auquetil, the father-in-law of Popelin, where a furnace had been established for treating the enamels.

A rupture afterwards occurred between Popelin and Meyer, which was accentuated by their friends. I have had the opportunity of reading the various articles written respecting the question which of these two men really revived the art, and I have also had the opportunity of hearing from M. Meyer his account of the transaction, and reading the original letters referring to it. In addition to this, I received lessons from M. Meyer in enamelling, and have read the published works of M. Popelin, and seen several enamels executed by him.

The truth, I think, is easy to get at. M. Meyer, so far as technique is concerned, was unquestionably the originator of the methods. The recipes given for making enamels in Popelin's book are ridiculous, and show that he could not have made what he professes to describe. Thus, for instance, he proposes to make cobalt blue with fondant ten parts and oxide of cobalt two parts—that is, one-fifth the part of oxide of cobalt. This would make a black. The right proportion is one two-hundredth part of oxide of cobalt. For chrome-green he takes from one-third to one-sixth of oxide of chromium; the right quantity for a full green is one one-hundredth. I speak feelingly on this point, for I cannot say how many crucibles full of impossible enamels I made after the recipes of Popelin. His "fondant" on clear enamel is prac-

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ticable, but is loaded with borax, a most pernicious ingredient, and his whole chapter on the manufacture of enamels is full of pretension which certainly is without foundation. I inquired of M. Meyer whether M. Popelin made his own enamels. He replied that certainly he had not done so so far as he was aware. M. Meyer gives in his works a similar recipe for fondant, but does not indicate the proportions for making enamels; he has always bought all he uses from one or other of the Paris manufacturers, of whom Soyer, Rue Chapon, is the best in my opinion.

On the other hand, though Popelin was not the originator of the art, and though in his curious, conceited writings (now rather rare and hard to procure) he gives no credit to his true teacher, yet there can be no doubt that he had a considerable artistic gift. His description of the progress of French art in the introduction to his work on painted enamels is admirable, and shows him to be an art critic of rare power, as well as a writer of first-rate ability.

He has also left behind him a certain number of very interesting works. The style he worked in and admired was the French Renaissance, as expressed in such artists as Jean Goupeau, and this selection of the art of one of the best periods of his native country does honour both to his patriotism and his discrimination.

Although I have been obliged to speak rather severely of his work from the point of view of scientific knowledge, yet from the point of view of an artist I cannot too strongly recommend it to all interested in the subject.

MODERN ENAMELS

During the latter part of the nineteenth century enamelling made great progress in Paris. M. Meyer was employed to give lessons in the municipal schools, and thus the technique was popularized.

Of the technical knowledge of the French it is impossible to speak too highly. In the shops which front the Place St. Sulpice, the ecclesiastical quarter of Paris, there may be seen enamels of sacred subjects which from the point of view of workmanship are really marvellous. No Renaissance artists had such extraordinary command of technique.

But I am sorry to say that there is an absence of artistic inspiration. The plaques are most of them lifeless copies after Raphael, and after less worthy masters. The grisaille is too smooth, and the whole has a mechanical look which is very wearisome. Moreover, the French are fond of a chocolate-brown, which gives to the work the tone of a photograph. Nothing can be more unpleasant than this detestable pigment. Those who use it must surely be deficient in a sense of colour.

It is now time to turn to England.

After the death of Essex the art of painting on enamel almost died out. But about the year 1860 an interesting attempt was made to revive it, and Mr. Ruskin offered a prize for a piece of enamel executed in the Champlevé fashion. The man who gained it was a jeweller, who was said to know more about the manufacture of enamels than any one. I pursued his track with some difficulty, and at last found him in a condition of great poverty in an almshouse of the Goldsmiths' Company. I do not think his knowledge of the manufacture of enamels was very considerable. He had a book of

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recipes which he was very chary of showing, and a number of interesting specimens of his work. He has since died, and I do not know what has become of them.

Meantime, however, the art was introduced from France by a workman called Dalpeyrat, who started in connexion with a firm of vendors of colours, and published a small treatise. The descriptions of the methods of work in this treatise were correct; the methods given for the manufacture of enamels were entirely inadequate and erroneous, being taken (without acknowledgment) from Popelin and other previous treatises devoted to enamels of a different description.

Dalpeyrat, however, did one piece of service. He taught Alexander Fisher, who has done more for the art in England than any other man.

The first lessons given in England in enamelling were in 1885, under the auspices of Thomas Armstrong, the director of the art division of the South Kensington Museum, who had the judgment to discern the importance of the new movement. The lectures were given by Dalpeyrat.

Alexander Fisher attended them. He is the son of a Staffordshire potter, who afterwards set up a furnace in Torquay, and who invented several ingenious processes for enamelling upon terra-cotta. He only attended two of the lectures, the rest of the art he worked out for himself. For the last fifteen years he has given lectures and taught classes in various parts of London.

A specimen of his work is illustrated opposite. He may fairly claim to be the best artist of all the regular workers in enamel, and unquestionably will



A PIECE



A PIECE

BY NELSON DAWSON

MODERN ENAMELS

be best esteemed in the future. His work does not belong to any school, and is chiefly marked by a preference for transparent opalescent hues. As an art jeweller he has also done good work, and a chalice in ivory and gold, now in one of the churches at Brighton, is, I think, one of the finest pieces of modern goldsmiths' work. Directly or indirectly all enamellers in England may, I think, claim to be his pupils. The work of Mr. and Mrs. Dawson probably ranks next to that of Mr. Fisher. They have executed some very nice caskets and other pieces. Mr. Ashbee's work, done after his designs at his School of Handicrafts, and also, I believe, in France, is also very good in the *art nouveau* style. Of Mr. Fisher's pupils may be mentioned John Eyre, Mr. C. Watts, Lady Carmichael, Miss Swainson, and Miss McLaren. Mrs. Traquair, the renowned illuminator and designer, has of late years also taken to enamelling, having been taught by Lady Carmichael. The work she has done is small, but very pretty and characteristic. I ought in this connexion not to omit the name of the Hon. Mrs. Wyndham, who has exhibited several small pieces showing great artistic feeling, and has proved an energetic and sympathetic patron and encourager of the art.

In addition to these, there is being executed a good deal of ordinary enamelling by professional trade jewellers, and many of the shops, such as those of Giuliano, are full of their work. Mr. Child, a jeweller of Kensington, has also a large number of enamelled trinkets in his showrooms.

Perhaps the greatest fault to be found in all this modern work is that, as a rule, the enamellers are

EUROPEAN ENAMELS

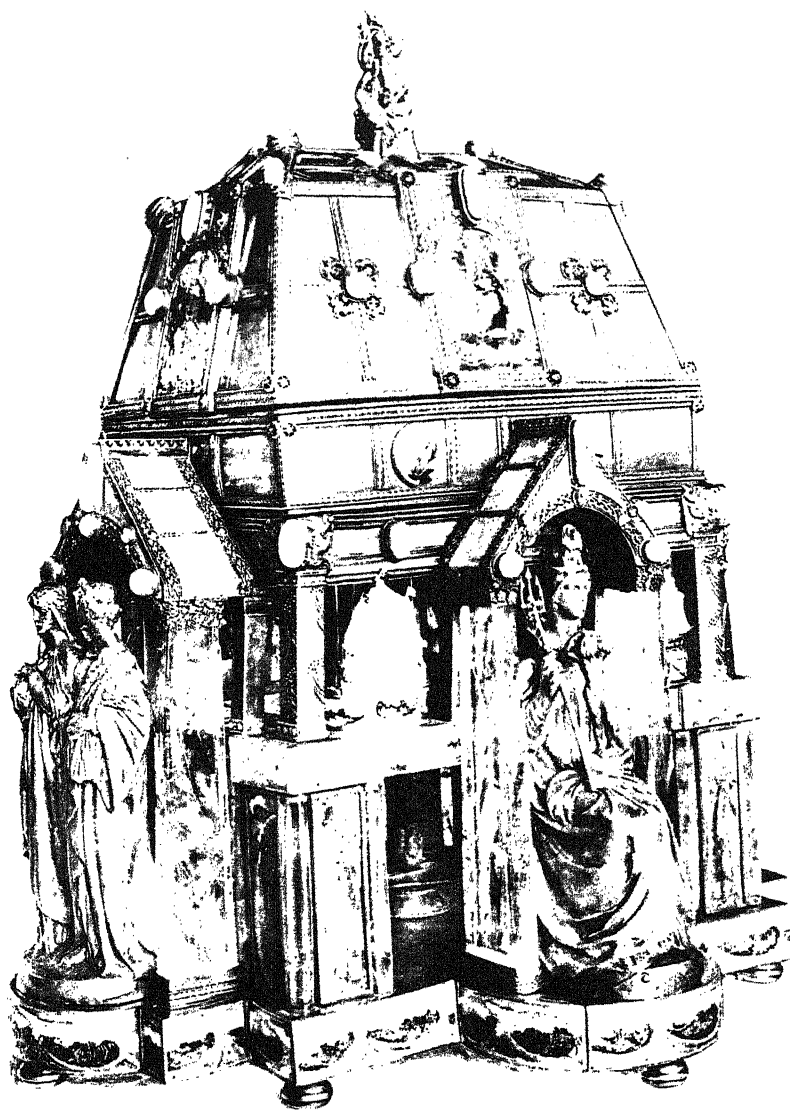
rather weak in drawing. They are content, as a rule, with small pieces, and usually hardly aim sufficiently high. Much that yearly appears at the Arts and Crafts Exhibition ought to be withdrawn.

This, perhaps, is natural when an art is in its infancy.

The great work that new art is performing is in the improvement of public taste. In the Victorian era design in jewellery had sunk to its lowest ebb. Stones were made simply a means for the display of wealth. The reason, perhaps, of this is to be found partly in the insensate craving for novelty, which forbids ladies to be seen often with the same dresses or sets of ornaments. Hence, a striking enamel would not be popular because it would be recognized, whereas a few large diamonds in practically no setting at all could be worn again and again, and would suit one dress after another.

With one exception, so far as I am aware, no regular painter of distinction has taken to enamelling. The exception is Professor von Herkomer, who, with the extraordinary characteristic energy and ingenuity that distinguish him, has struck out several new paths of his own. He has executed an enormous enamelled portrait of the Emperor of Germany. This work seems to have puzzled many of the art critics, who did not know whether to admire it or not. Judged by the standard of oil painting, it is, of course, deficient in delicacy of gradation, and many other qualities that are peculiar to oil. But as a decorative work it appears to me of extraordinary merit, and is probably the finest portrait in enamel in existence. The Professor has





THE CHAMBERLAIN CASKET
BY H. WILSON

MODERN ENAMELS

also invented some new processes for enamelling copper vessels.

Mr. Holliday, the well-known decorative artist, has conceived a new method of applying enamels. Copper bas-reliefs are formed out of a number of pieces of copper. These are all enamelled separately, and then, like a puzzle, fitted together and secured with cement and nails. In this manner very large pieces of work can be executed suitable for churches and large rooms. The method undoubtedly has a future before it, for no majolica can rival the gorgeous colour that can be produced by the use of enamel upon metal. The work of Mr. Wilson is rather in the direction of goldsmiths' work than of enamelling. But he has made use of enamelling as an adjunct to the splendid casket which was recently presented to Mr. Chamberlain by members of the Constitutional Club.

Enamelled jewellery is also made on a commercial scale in Birmingham. Many of the pieces are in excellent taste, and all are well and substantially made.

Art is at present in a transitional stage, which to some extent accounts for its unsatisfactory condition, and for the very different views that are taken of it by different painters and critics.

A reaction has set in against "pretty" art, which extends to a reaction against all art that seeks to tell a story or to arouse the emotions. This results in the fact that by many sculptors and painters beauty is apparently not valued at all, and the result is horrible to those accustomed to desire the beauty which the old masters infused into their work.

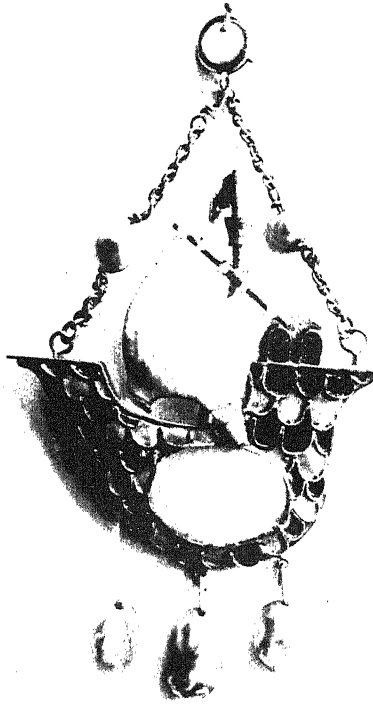
EUROPEAN ENAMELS

In exchange for this want of beauty we have truth, earnestness, strength, and a deep study of nature.

I believe, however, that no art will survive without the element of beauty, and that the ugly works produced in the present chaotic condition of art are the necessary accompaniment of the revolution that is taking place and the precursor of a new and better school. We need a Raphael who shall infuse beauty into the vigour and power of a Rodin.

And we need a series of painters who, while utilizing the discoveries of the impressionists, shall be free from their affectations, pedantries, and occasional vulgarities.

The arts of the jeweller and enameller have ever been attendant on those of sculptors and painters, and when perhaps a fresh definite direction shall have been given to the general progress of the art, jewellery and the decorative arts will also be delivered from the chaotic confusion that now surrounds them, and develop a distinctive and characteristic style.



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BY H. H. CUNYNGHAME

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